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CONSTANT VIGIL: In October 2014, Washington state high school student Jaylen Fryberg perpetrated the second-deadliest high school shooting in the U.S. since Columbine.

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The fake drug industry is exploding, and we can't do anything about it. *by Alexandra Ossola*

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With Jaylen Fryberg no longer alive to answer for the deadliest high school shooting in a decade, prosecutors are going after his father—unless his neighbors get him first. *by Max Kutner*

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BIG SHOTS

HUNGARY

Wrong Side of the Tracks

Röszke, Hungary—A child holds a baby at a collection point near the Serbian border on September 13. With a record number of refugees and migrants flooding into the European Union, Germany announced it would impose temporary border controls in the south, a move quickly followed by Austria, Slovakia and Denmark. The announcement, which ends two decades of border-free travel in the EU, was seen as an attempt by Germany to force other countries to shoulder some of the burden of the refugee crisis. Germany has said it will take in up to 800,000 people by the end of the year.



LASZLO BALOGH







BIG
SHOTS

U.S.A.

Look at That Face!

Washington, D.C.—Republican front-runner Donald Trump makes his way through the crowd after addressing a Tea Party rally against the Iran nuclear deal on September 9. One-third of GOP voters surveyed selected the real estate tycoon as their candidate of choice in a *Washington Post*-ABC News poll released days before the second Republican primary debate. Trump, who has capitalized on his image as a Washington outsider, is also leading the polls in the crucial early-voting state of Iowa.



JONATHAN ERNST

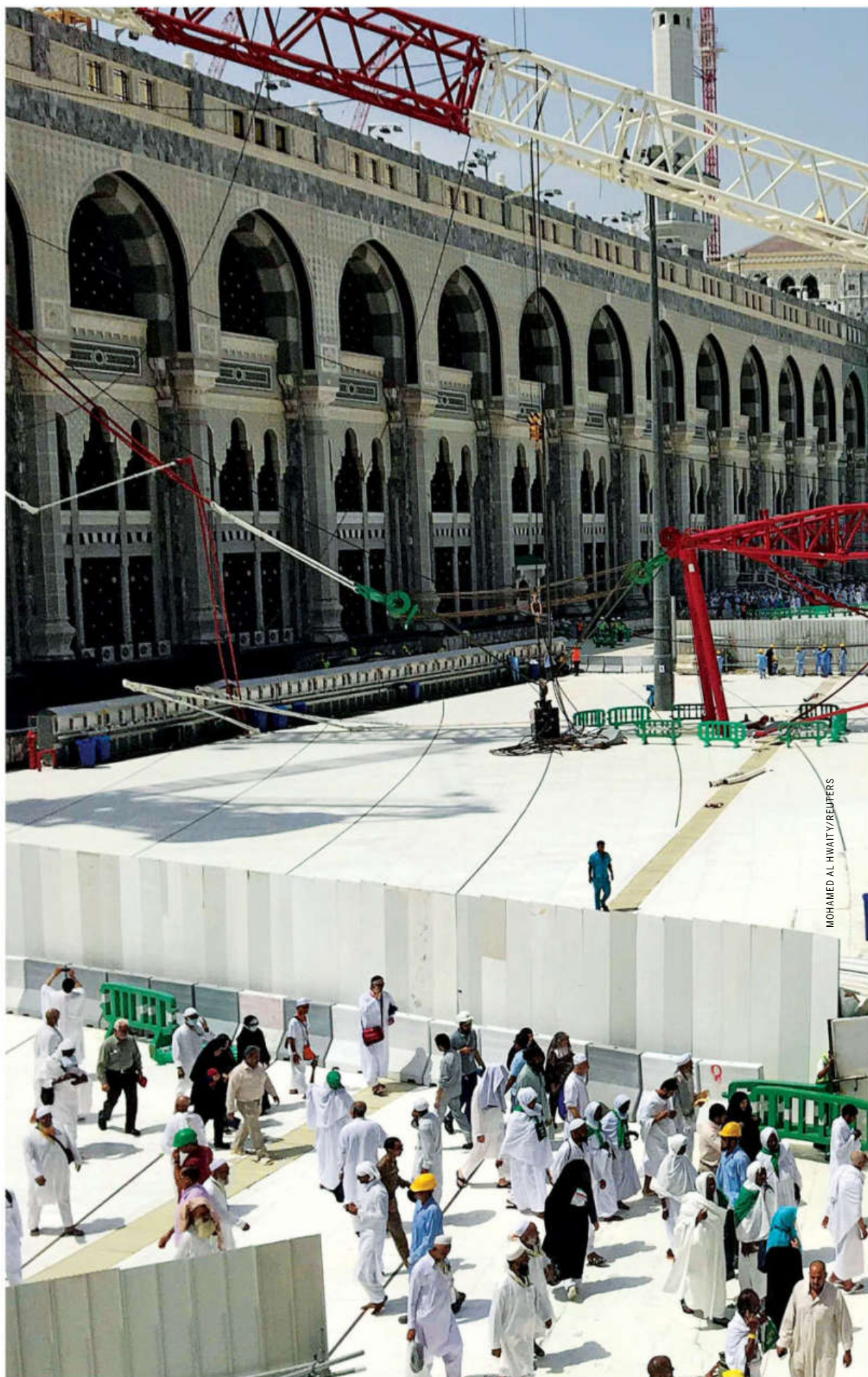
SAUDI ARABIA

Fallen

Mecca, Saudi Arabia—Religious pilgrims walk by a crane the day after it collapsed onto the Grand Mosque in the Muslim holy city on September 11. The collapse, which Saudi authorities blamed on high winds, killed 107 people and injured more than 200 ahead of the annual hajj pilgrimage. The cranes were in place as part of development and expansion projects begun two years ago, with the intent of enlarging the mosque to accommodate greater numbers of travelers to the holy site. In 2013, more than 3 million people made the pilgrimage, and construction to allow for another 2.2 million visitors was scheduled to be completed before this year's pilgrimage starting September 22.



MOHAMED AL HWAITY



MOHAMED AL HWAITY/REUTERS





SOUTH AFRICA

Skull Session

Mogale City, South Africa—South African Deputy President Cyril Ramaphosa holds the skull of a member of the newfound species *Homo naledi* with Lee Berger, a professor at the University of the Witwatersrand, on September 10. Researchers found more than 1,550 fossil elements from at least 15 individuals in the Rising Star Cave outside of Johannesburg, making it one of the largest samples of hominin species in the world. The exact age of the fossils has not yet been determined, but the similarity of the bones to many aspects of human physiology may place *Homo naledi* near the root of the *Homo* genus from which modern humans evolved between 2.8 million and 2.5 million years ago.



ALON SKUY



P A G E O N E

POLITICS

CHINA

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IMMIGRATION

CAMBODIA

ECONOMY

HACKED IN CHINA

Despite its slowing economy, China still has leverage over D.C., especially when it comes to cyberspying

WHEN PRESIDENT Barack Obama met with Chinese President Xi Jinping nearly a year ago, his visit ended with a stinging lecture. Standing in Beijing's ornate Great Hall of the People, Xi warned the U.S. not to get involved in Hong Kong's pro-democracy movement and scoffed at Washington's concerns over the spike in anti-American diatribes in China's state-run media. He also defended his government's refusal to renew the visas of several U.S. foreign correspondents; they had been critical of Communist Party leaders, which is against the law in authoritarian China. "Let he who tied the bell on the tiger take it off," Xi said. Translation: "You created the problem; you fix it."

Xi's reprimand last November underscored the enduring paradox of U.S.-Chinese politics. The two countries have mutual interests and cooperate on a variety of issues—from climate change to counterterrorism. But they're also fierce rivals with little patience for each other's historical claims or ideological conceits. And

as the two leaders prepare for their meeting in Washington in late September, that mixture of pragmatism and pugnacity still defines their relationship. At the end of Xi's visit, which will include a gala state dinner at the White House with alternating toasts, the two leaders are likely to cite a long list of issues they agree upon, including the Iran nuclear accord and the need for Beijing's continued reforms toward a consumer-driven economy. But on the major issues that deeply divide them, little progress is likely. And even though Xi may have fumbled the handling of China's recent stock market crash, experts in the U.S. don't believe he's lost any leverage with Obama. "People should be modest in their expectations" for the summit, says Jeff Bader, the top China expert on the National Security Council during Obama's first term.

Case in point: cyberspying. For years, Beijing's hackers have been breaching the computer networks of U.S. companies, stealing their intellectual property and giving their commercial secrets to

BY
JONATHAN BRODER
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CARLOS BARRIA/REUTERS

BIG BROTHER: A U.S. computer security company identified this building in Shanghai as Unit 61398, a secretive military outfit blamed for hacking attacks, though China denies the report.



Chinese firms, according to U.S. officials. Former National Security Agency Director Keith Alexander says this cybercrime has led to “the greatest transfer of wealth in history,” costing the U.S. economy an estimated \$250 billion a year.

Though the Obama administration hasn’t publicly named China as the culprit, Director of National Intelligence James Clapper has fingered Beijing as “the leading suspect” in the June breach of the Office of Personnel Management, in which someone stole the personal information of 22 million current and former federal employees. Clapper and other intelligence officials say that kind of government-to-government cyber-spying is fair game and something the United States does as well. But they draw the line at Beijing stealing commercial trade secrets, saying that sort of behavior violates an unwritten code of conduct in the world of espionage.

China, of course, denies that its cyberspies turn over the secrets they uncover to Chinese companies, claiming that private hackers are to blame. And these officials point to recent Chinese legislation that targets such criminals. Yet Chinese officials say commercial intelligence is a valid target for their spies. “I saw this argument floated two years ago in discussions with the Chinese,” recalls James Lewis, a former senior State Department official who has dealt with China on espionage-related issues. “The Chinese said, ‘No way. We get it—you want to define the rules of the game so you win. We don’t find that very appealing.’”

Fed up with China’s hacking, some U.S. law enforcement and intelligence officials favor imposing sanctions in advance of Xi’s visit against Chinese individuals and companies responsible for cyberattacks on U.S. corporations. “This would be a demonstration that the U.S. government is willing to introduce some friction into the relationship right before the summit,” says Robert Knake, who recently stepped down as the White House’s director for cybersecurity policy. “The Chinese government just might say, ‘This is just not worth it anymore. Look what it’s doing to the U.S. relationship, and look what it’s doing to our companies, which will have a harder time competing abroad, getting international financing,

closing deals abroad.’ At least, that’s the hope.”

But others say the administration will likely wait until after Xi’s visit to determine if punitive measures are needed. Some China experts warn that whatever the timing, sanctions will provoke an angry Chinese response. In the wake of the U.S. indictment last year of five Chinese army officers for hacking into the networks of several major American corporations, Beijing pulled out of a working group to address cybersecurity issues. It’s unclear how China would respond to sanctions, but it could trigger a cycle of retaliation at a time when global markets are increasingly concerned about the future of the Chinese—and global—marketplace. In fact, some experts fear any new tensions could undermine what they hope will be one of the summit’s most important outcomes—a statement by both leaders indicating that the world’s two largest economies are not descending into a bruising economic slugfest. “People may care about disputed rocks in the South China Sea, but they care

CHINESE CYBERCRIME HAS LED TO “THE GREATEST TRANSFER OF WEALTH IN HISTORY.”

a lot more about their 401(k)s,” says Bader, now a China scholar at the Brookings Institution.

In a move to counter the prospect of sanctions, China is co-hosting a September 23 forum in Seattle during the first leg of Xi’s visit. He, along with top Chinese technology officials and executives, has invited the leaders of the major American tech companies, including Apple, Facebook, Google and IBM, to discuss doing business in China, the world’s largest Internet market. Though Beijing prevents Facebook and Google from operating on Chinese soil, the prospect of that changing will make the invitation hard to refuse. And U.S. officials worry the gathering will undermine Obama’s ability to pressure China on commercial cyberspying.

U.S. experts say the only way to resolve the espionage dispute is some sort of give-and-take between the two countries. But the U.S. would have to identify not only what it needs from the Chinese but also what Washington would be willing to give up in exchange. One possible carrot: stopping U.S. electronic spy flights along China’s





DIPLOMATIC DÉJÀ VU: When President Obama met his Chinese counterpart a year ago, he got an earful from Xi Jinping. Don't expect any progress on cyber-crime this time.

coast. Yet short of a complete halt to China's cyberespionage against U.S. companies, it's not clear what Washington would be willing to accept in return. "We need a real strategic dialogue that talks about how we come to a stable arrangement between opponents," says Lewis, who now directs the technology and public policy program at the Center for Strategic and International Studies, a Washington think tank. "That's what we have to recognize. We're not friends anymore."

In the meantime, the Pentagon's cyberwarriors are preparing for battle against their counterparts in China. In a September 8 statement, Admiral Michael S. Rogers, commander of the new U.S. Cyber Command, said "intellectual property and personal information" are vital American assets his soldiers will protect from foreign cyberspies.

"When the Pentagon steps up and says we're going to protect intellectual property and personal information, that's throwing down the gauntlet against" Chinese hackers, says Justin Harvey, chief security officer for Fidelis Cybersecurity, a computer security company whose clients include the U.S. Army and Commerce Department.

Perhaps, but when Obama and Xi meet in Washington, don't expect the same sort of tough talk from the White House. The Chinese leader won't have much patience for American lectures or reprimands. Even with its economic problems, China remains America's largest importer, the third largest market for American exports and an increasingly central player in the global economy. And that means Obama is likely to tread carefully around his visitor from Beijing once again. **N**



HEY! WHO LEFT THE BORDER OPEN?

The 1965 immigration reform act, now 50 years old, wasn't supposed to encourage Mexican immigration. Oops!

ON THE 2016 campaign trail, immigration has been a flash point unlike any other. But as Donald Trump pushes his scheme to build a wall across America's southern border and Hillary Clinton promises to go further than President Barack Obama in protecting migrants without documentation, a major immigration reform from a half-century ago is a reminder that policy changes often don't go as planned. For today's politicians, perhaps the biggest take-away of the Immigration and Nationality Act is to expect unintended consequences.

It was back in 1965, during the depths of the Cold War and the peak of the civil rights movement, that the United States overhauled its immigration laws. Working with liberal Democrats and liberal Republicans (who existed back then), President Lyndon Johnson pushed a bill that did away with the "national origins quota" system. The old quota system, in place since the 1920s, determined who could immigrate to the U.S. based on ethnicity, with a heavy tilt toward Western Europeans—especially the English, Irish and Germans. Only small allotments were granted to Eastern Europeans, Asians and Africans.

That became an issue for the United States in the '60s, when new countries were emerging from colonialism, pitting the U.S. and the Soviet Union in a contest for their allegiances. Republican Senator Jacob Javits, a liberal from New York, noted in September 1965 that the immigration

system, with its bias toward Western Europeans, "remains today a target for Communist propaganda...making our effort to win over the uncommitted nations more difficult."

The racial discrimination inherent in the quota system clashed with the idealism of the Civil Rights and Voting Rights acts. And most of all, the ethnic limits ran contrary to many Americans' image of their country. "As President Kennedy so aptly stated, we are a 'nation of immigrants,'" Massachusetts Republican Senator Leverett Saltonstall told his colleagues during the debate on the bill. "There is scarcely an area of our national life that has not been favorably affected by the work of people from other lands."

By '65, however, some conservatives in the U.S. House publicly "worried about the size and scale of future Latin American immigration," says Dan Tichenor, a professor of political science at the University of Oregon, "and were trying to put barriers in its way." Liberal lawmakers didn't like that idea, but they doubted that the new restrictions would have much impact. The limits were high enough, Javits conceded, that immigration from the Western Hemisphere under the new law "would be approximately the same as the level reached last year"—a modest 140,000 or thereabouts. Yet the total number of persons of Mexican origin in the U.S. went from 5 million in 1970, the first census after the act, to almost 34 million today.

BY
EMILY CADEI
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FENCE-SITTERS:
Before 1965, the
United States
had a “good
neighbor” policy
that put no caps
on migration
from Canada
and Mexico.

The Western Hemisphere cap was one key concession that opponents of Johnson’s immigration reform were able to extract. The other significant change was that visas be prioritized for migrants with family ties in the United States. Johnson and the bill’s supporters backed a system that would have put a priority on skill, which ended up being secondary in the new law.

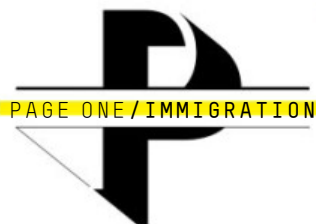
When Johnson signed the Immigration and Nationality Act at the foot of the Statue of Liberty 50 years ago this October, he declared that the new law undoing the old quota system was “not a revolutionary bill. It does not affect the lives of millions.” In fact, it did. The new system, which opened up American immigration to the world, has dramatically shifted the blend of people coming into the country while contributing to the surge in immigrants from Mexico and Latin America entering the U.S. without documentation—neither of which its authors ever intended.

There was “a whole series of consequences unleashed” by this new law, says UCLA law professor Hiroshi Motomura, author of *Americans in Waiting: The Lost Story of Immigration and Citizenship in the United States*. Though the 1965 law eliminated ceilings on visas for specific ethnicities across Asia and Africa, it did keep a cap in place for the Eastern Hemisphere—encompassing

**AS LYNDON JOHNSON
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migrants from Europe, Africa and Asia. As a compromise, it also set the cap on immigration from the Western Hemisphere for the first time. That’s right: The U.S. used to allow unlimited immigration from Mexico. Even as restrictionists had layered on more and more limits on immigrants, starting with the Chinese in the 1880s, the Japanese around the turn of the century, and the rest of Asia, Africa and much of Europe in the 1920s, the U.S. allowed the open flow of immigration from Canada and nations to the south, part of what was considered a “good neighbor” policy.

The conservatives who backed a system that would give a majority of visas to family



members of U.S. citizens “thought we would see an expansion in Southern and Eastern European immigration,” says Tichenor. “They never really anticipated the dramatic increase in Asian and Latin American immigration” that resulted thanks to family unification rules. Essentially, the new law allowed American citizens to obtain visas for not only their small children and spouses but also their sisters and brothers and adult children, who then became citizens and began the process over again.

That started a slow but steady progression of Asian and Latino migration, which had only small populations in the United States before '65. In the 1950s, Europeans made up 56 percent of those immigrants obtaining lawful permanent residence in the U.S., while those from Canada and Latin America were 37 percent, and all of Asia accounted for a measly 5 percent, according to Department of Homeland Security statistics. By this past decade, however, Europeans had dropped to just 14 percent of new lawful permanent residents, compared with 35 percent from Asia and 44 percent from the Americas.

One more factor had a major impact: At the same time immigration law was shifting in 1965, a new national workforce policy was kicking in. A year earlier, in 1964, the federal government ended what was known as the Bracero Program, launched during World War II's labor shortages to provide temporary laborers from Mexico to American farms and fields. But the program was rife with worker abuses and ardently opposed by labor unions, which believed the migrants pushed down wages for Americans. That opposition finally succeeded in halting the Bracero Program in '64, to the consternation of the agriculture industry.

Proponents of the move in the Department of Labor and elsewhere believed they could wean farmers off Mexican labor. But “many of the same people who were coming under the Bracero Program or their relatives or the people who were in those networks continued to come,” says Boston College professor Peter Skerry, an expert on immigration and ethnic politics. It's just that now they came illegally. Over the ensuing decades, that reality combined with the new

caps on migrants from Latin America turned what had been legal migration illegal.

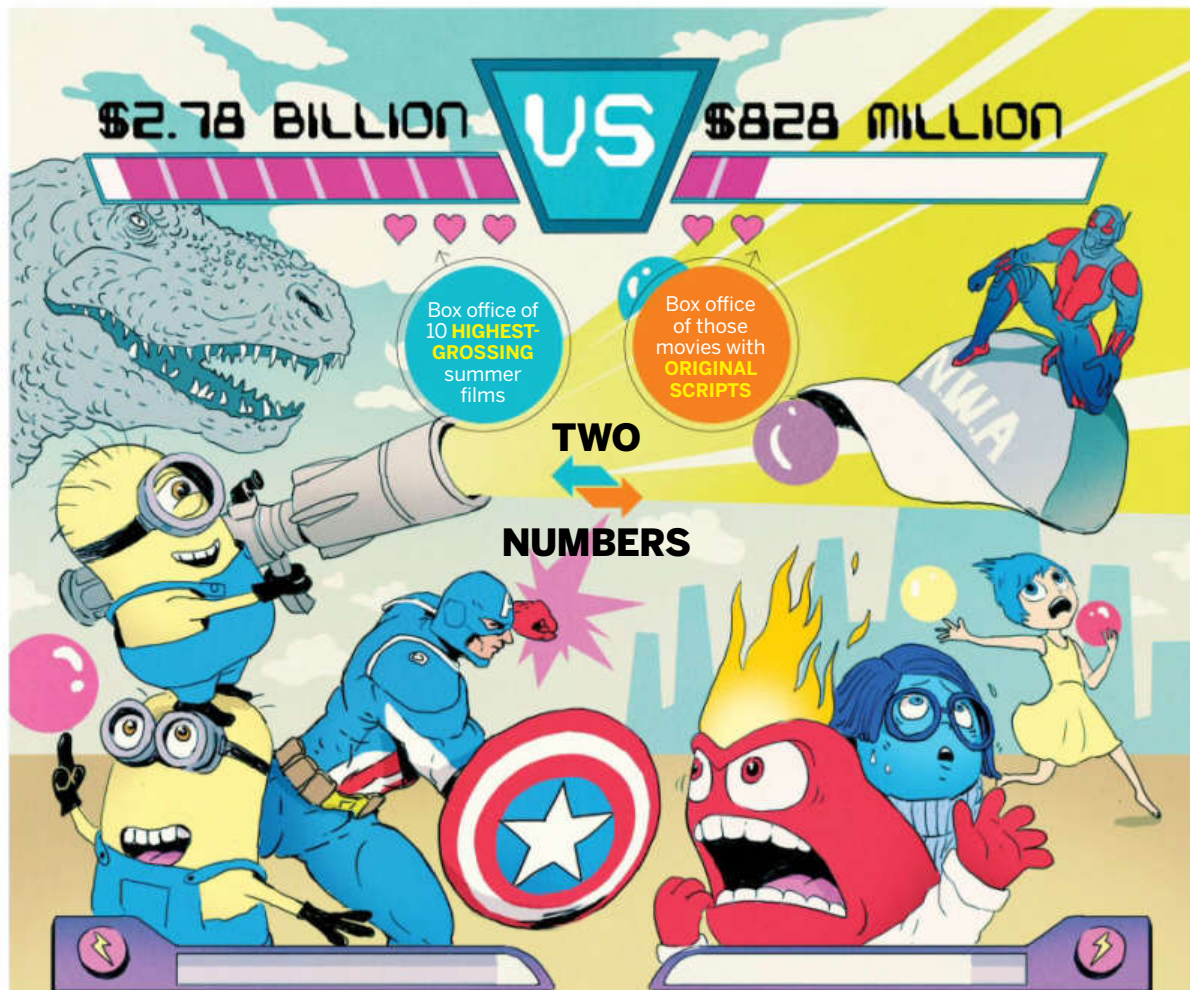
Economic trends in both Latin America and the U.S. also encouraged more migration. As Moto-mura explains it, 1965 was the “beginning of a mismatch of the legal immigration system and the demands of the economy.” Specifically, urbanization and economic dislocation drove Mexicans and other Central Americans from rural areas north in search of work, while Americans were obtaining higher levels of education and moving away from menial labor. “In 1950, more than half of the labor force were high school dropouts. Now it's less than 5 percent,” notes Tamar Jacoby, president of the business-backed coalition ImmigrationWorks USA. The law's drafters “didn't foresee that.” That's an understatement.

The lesson of unintended consequences is something advocates on both sides of today's immigration debate acknowledge. “The first lesson is: Don't believe everything a politician tells you. As we've seen with all kinds of social innovations from the 1960s and 1970s, the assurances of their promoters turn out to be incomplete or false,” says Mark Krikorian, the head of the Center for Immigration Studies, which advocates for

THE U.S. USED TO ALLOW UNLIMITED IMMIGRATION FROM MEXICO.

tighter controls on immigration. He and Jacoby agree that the family migration provisions have pushed the system out of whack. But they're divided over whether the country still needs robust immigration, and if unmet labor demand is at the root of America's glut of undocumented migrants.

Disagreements on immigration ultimately come down to a debate over what America should be and how its economy should work. Though President Johnson promised the law “will not reshape the structure of our daily lives,” the ensuing shifts in population and migration patterns have indeed meant “big changes in American life,” says Skerry, for good and for ill. The last time politicians hashed out a new immigration system, they didn't entirely weigh those implications. Today's leaders would be wise to think about the ripple effect before they mess with the borders. ■



Mission Entirely Possible!

IT'S NOT YOUR IMAGINATION. UNIMAGINATIVE, UNORIGINAL MOVIES ABOUND

Been to the movies this summer? Then you probably noticed that sequels, prequels and remakes dominate the box office, while original films are scarce.

Define an original movie as any film not directly based on another movie or a TV series (it doesn't have to be an "original screenplay"—book and comic book adaptations are OK, if not previously adapted for the screen), and the numbers are striking. Take the top 10 highest-grossing movies of the past summer. Only four of them are original by this definition, and only one of those cracks

the top five.

The top 10 summer movies pulled in \$2.8 billion, according to figures from Rentrak, but the four "original" movies of the bunch generated only \$828 million of that, much of it from the Pixar insta-classic *Inside Out*. And that's being generous, counting *Ant-Man*, part of the Marvel Cinematic Universe franchise but not a sequel, as original. The two top-earning movies—*Jurassic World* (\$647 million) and *Avengers: Age of Ultron* (\$458 million)—are both sequels.

"There's a real herd mentality [in Holly-

wood]," says Stephen Follows, a producer and film data researcher. "When one thing works, they double down." The flood of superhero movies, for instance, can be traced to the surprise success of *Iron Man* in 2008. Want to understand the appetite for endless fantasy and sci-fi series like *The Hunger Games*? Look at how *Harry Potter* and *Lord of the Rings* rocked the box office again and again in the 2000s.

"The Hollywood execs are looking for existing content that has proved itself somewhere," Follows says.

But this plan doesn't

always work. "The relative failure of some retreads this summer shows that there is no such thing as a surefire hit," says film critic and historian Leonard Maltin. "*Magic Mike XXL* wasn't the smash its studio was expecting, and even fanboys sensed that *Fantastic Four* wasn't going to live up to their expectations."

At least franchise fever has produced some decent movies. As Follows notes, *The Dark Knight* was a sequel to a reboot to an adaptation of a comic book. Go figure.

BY

ZACH SCHONFELD
@ZZZZaaaccchhh

SOURCE: RENTRAK



IT'S TIME TO PROTECT CHILDREN

Millions of children are in danger of physical, emotional and sexual abuse

IN FEBRUARY this year, I made a commitment to spending the next 10 years doing everything I can to make the world a safer place for children. In my role as a UNICEF goodwill ambassador, I launched 7: The David Beckham UNICEF

Fund, promising to use my voice and influence to help raise vital funds and to speak up for children who need it most.

After the launch of the fund, I traveled to Cambodia in June to focus attention on the issue of

BY
DAVID BECKHAM



+ SELFIE SACRIFICE:
In June, Beckham visited an education center in Cambodia as a UNICEF goodwill ambassador; many of the children at the facility have endured some form of abuse.

violence and how it affects children. I visited Siem Reap, a busy tourist town right next to Angkor Wat. In the intense heat, amongst thunder and rainstorms, I spent time talking to children and young people about some of the devastating experiences they'd gone through at the hands of the people who were supposed to protect them.

I'd traveled with UNICEF many times before. I'd met children living in the aftermath of Typhoon Haiyan in the Philippines. I'd met children and mothers in South Africa living with HIV. But I'd never traveled anywhere to focus on the issue of violence. This was different. I quickly became aware of how difficult it was going to be to find out about the children's experiences.

At the end of a dusty street, set back from the road behind a big iron gate, I visited a refuge run by one of UNICEF's partners, Friends International, which was a temporary home for around 50 children who've all had incredibly tough lives. Many of the children have been subjected to violence and abuse.

It was very quiet when I arrived, unusually quiet for a place with so many children. I met 18-year-old Saron* first. I sat with her and her social worker whilst she was brave enough to tell me what had happened to her. Saron was abused and raped by her stepfather when she was 15 years old. It was from being raped that Saron became pregnant and gave birth to a little boy.

I saw that Saron was deeply traumatized and she clearly struggles to cope. Her son has been placed in foster care while she stays at the refuge, getting the help she needs to try to overcome what happened and rebuild her life.

I find it devastating to think that any child should have to suffer pain like this, to wake up at night in fear and to have to live with the memories of this type of violence every day, but sadly Saron is not alone.

Every five minutes, somewhere in the world, a child dies from violence. Millions more are in danger of physical, emotional and sexual abuse that could destroy their childhoods forever. Violence is often hidden from view, making children invisible and easy to remain unnoticed.

Another girl showed me around the refuge with Saron, Tavey*, a 13-year-old girl with a bright smile. She was very excited to challenge me to a game of volleyball, laughing as she talked. Despite the happiness she appeared to show, I couldn't help but feel deeply distressed and



saddened about what she had been through.

Before she arrived at the center, Tavey had run away from home after being beaten by her brother-in-law. She found herself alone, walking the streets at night, too afraid to return back to her house. To me, this is every parent's nightmare—the thought of someone beating their child so badly that he or she needs to escape and ends up alone, wandering the streets and being put at risk of even more violence. My heart broke that day thinking that anyone could ever hurt someone like her. A stranger saw Tavey and called a dedicated hotline for violence cases like this run by UNICEF's partners in Cambodia, and she was immediately referred to the refuge. Thankfully, she is now safe and happy.

During my visit, I also visited a Friends International drop-in center, another facility supported by UNICEF to keep children safe. Here, children who live on the streets go for a shower, to rest, play and talk to social workers; it's a place to get some help when there is nowhere else to turn. I was shocked to meet teenage girls who

THIS IS EVERY PARENT'S NIGHTMARE...SOMEONE BEATING THEIR CHILD SO BADLY THAT HE OR SHE NEEDS TO ESCAPE AND ENDS UP ALONE, WANDERING THE STREETS.

have been forced into prostitution to help support their families or to simply survive on their own. Sitting on the floor of the center, the girls told me about their lives, "working" all night and then coming to the center to get some sleep and respite. One of them slept on the floor the entire time I was there, exhausted. The others sat making flowers out of tissue paper and doing origami. It was deeply disturbing to hear how these young girls had grown up without a childhood

and were forced to work on the streets.

I asked one of the girls where she would go if she couldn't come to the center, and she said "nowhere." It really hit home at that moment that for these children the drop-in center is their only lifeline. They haven't got anywhere else, and I don't want to imagine what would happen to them if it didn't exist.

UNICEF is working with the government and its partners on the ground in Cambodia and across the world to protect vulnerable children. The amazing social workers at the refuge and center that I met are helping children get off the streets, out of violent homes and back into school. I could see how deeply they care about the children they are helping, and to me, they are heroes.

Nothing could have prepared me for what these children and young people in Cambodia have experienced, and it is devastating to know that children in all corners of the world, in all communities and all countries, are suffering the same violence.

I feel honored to be in a position to do something to help if I can. After listening to Saron and Tavey, I now want to do more to shine a light on what is happening to children across the world. Things have to change. It's time for the world to come together and do more to actually prevent violence against children, not just respond to it when it happens.

If these children are brave enough to tell their stories, then we all have to be brave enough to take on the responsibility to listen to them and do something to help.

Some young people have already taken this step. Eighteen child survivors of violence have addressed a letter to world leaders calling on them to end violence once and for all. The letter comes at a time when the world is about to have a new set of Sustainable Development Goals—a set of goals that can shape the future for all of us for the next 15 years. This is a moment to make sure that world leaders take note of the letter, and make sure that children grow up in a world where they are not beaten, where they are not raped and where they are not



EVERY FIVE MINUTES,
SOMEWHERE IN THE WORLD,
A CHILD DIES AS THE RESULT
OF VIOLENCE. MILLIONS
MORE ARE VICTIMS OF ABUSE.

neglected or traumatized by violence.


The individual stories from the 18 young people are heartbreaking. Zina, 10, from Ukraine, is a survivor of war; Rabia*, 9, from Pakistan, a survivor of child trafficking; and Ravid, 16, from Cambodia, a survivor of domestic abuse. And they have come forward to fight for a world free from violence.

I think everyone needs to understand what



KICKING IN: Beckham has launched a fund with UNICEF to help protect children worldwide.

these children have been through, that they hear their stories and that we all do what we can. This September, I will travel as UNICEF goodwill ambassador to the United Nations in New York and will stand alongside the secretary-general to make sure global leaders understand how children are affected by violence and help put children at the heart of the new goals.

I want a world where children grow up safe: safe from war, violence, poverty and preventable disease. I hope others will join me to call on world leaders to put children, especially the most disadvantaged, at the heart of the new global goals and commit to ending violence against children. For Saron and Tavey, for all children everywhere, let's end the threat of violence right now. 

Former professional footballer **DAVID BECKHAM** is a goodwill ambassador for UNICEF.

A Letter From 18 Children Who Survived

DEAR WORLD LEADERS,

Every five minutes, somewhere in the world, a child dies as a result of violence.

We are young people from 18 different countries, survivors of violence who have experienced pain and abuse.

There are millions of children just like us.

We have been forced to flee our homes, fight as child soldiers and work as domestic slaves. We have been raped, beaten and attacked in our own communities. We have watched, powerless, as our parents, siblings and friends were murdered in front of us. Memories like these make our bellies burn with fear.

No child should start their life like this.

In September, you will meet to agree on new global development goals, a plan of action for the next 15 years. As young citizens of the world, we call on you to come together to build a safer world for children.

We hope that one day the only bruises on the skin of children will be the ones they get from playing in the playground.

You must act now to end violence against all children.

Do not wait another five minutes.

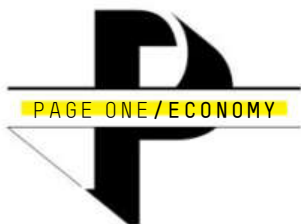
Our lives depend on it.

...

Parwana* (20),
AUSTRALIA;
Joao* (18),
BRAZIL;
Ravid (16),
CAMBODIA;
Laetitia (14),
DEMOCRATIC
REPUBLIC OF THE
CONGO;
Sabreen* (15),
GAZA;
Daldís (19),
ICELAND;

Tommy* (16),
IRELAND;
Ashley* (23),
JAMAICA;
Mohammad (15),
SYRIAN REFUGEE
IN JORDAN;
Akhrat (16),
NETHERLANDS;
Babagana* (12),
NIGERIA;
Rabia* (9),
PAKISTAN;
Alice* (18),
PORTUGAL;
Sane* (18),
SOUTH AFRICA;

Boto* (16),
SOUTH SUDAN;
Magu* (17),
SPAIN;
Zina (10),
UKRAINE;
Jodie (20),
UNITED
KINGDOM.
—
Names
marked *
have been
changed to
protect those
individuals.



PUMPING UP THE ECONOMY

The last time energy was this cheap, the Beatles were just getting started

THE MARKETS are heaving over fears of a China-fueled global slowdown, but for consumers there's good news here: They will be paying less as a percentage of disposable income for their energy than they did in 1960.

This year, American households are expected to pay an estimated \$700 less on average for energy expenditures than in 2014—a windfall that is expected to last through 2016, according to economists at the Energy Information Administration, the statistical arm of the U.S. Department of Energy. “We’re forecasting the average retail price of gasoline will be \$2.11 a gallon in the last quarter of this year,” says Timothy Hess, with the EIA’s petroleum market analysis team. “And gasoline prices are expected to stay below \$3 for all of 2016.”

While Europeans generally pay more for fuel due to higher taxes, the lower oil price still feeds through and gives drivers a break. “You don’t pay so much for gas, so you buy a TV,” says Vipin Arora, of the EIA’s macroeconomic team. “And that adds to disposable income and consumption, which represents about 70 percent of the U.S. economy. When consumers have more income available to them, they spend more, and companies hire more people to meet rising demand.”

All of which puts this recent global slowdown in a different light. For those still catching up with the market’s wild ride, an unexpected move by China to devalue its currency, the yuan, in early August, ignited a global equities and commodities selloff on jitters that the world’s second-biggest

economy (after the U.S.) might be hitting a wall. Beijing cut its interest rates and bank-reserve requirements—one of several times it has intervened to maintain growth this year—as the market pared losses and economists pronounced the era of rapid growth in China over, although more likely to result in a continued deceleration than a bona fide crash. “The current panic is essentially ‘made in China,’” wrote Julian Jessop, chief global economist at Capital Economics Ltd., a London-based macroeconomic research firm. “The recent data from other major economies have generally been good, and there is little to justify fears of a major global downturn.”

In fact, the panic is something from which all global energy consumers stand to directly gain. Because China is the world’s largest consumer of commodities—which include oil and petroleum products, like gasoline—the pullback in its economy is one of the key drivers of this summer’s eight-week losing streak in oil prices.

The strengthening U.S. dollar, in expectation of a Federal Reserve rate hike, has added to the pressure. Because oil is priced in dollars, it takes a greater amount of foreign currency to buy a barrel of oil when the dollar is strong. The result is that the price of U.S. crude oil fell to its six-and-a-half-year nadir last month. On August 24, the West Texas Intermediate benchmark closed below \$40 a barrel for the first time since the 2008-2009 financial crisis. A year ago, it was hovering around \$100 a barrel. Meanwhile, the European Brent crude oil benchmark slid below \$45 a barrel. Since

BY
**LEAH MCGRATH
GOODMAN**
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FUEL'S GOLD:
Experts expect the
price of a gallon of
gas to stay under
\$3 in the U.S.
through 2016.

that drop, both have drifted higher but remained under heavy pressure.

"It's a stimulus for the economy, because 80 percent of the crude oil that's produced goes straight toward transportation," says John Kilduff, founding partner of Again Capital, a New York-based hedge fund specializing in commodities investments. He expects airline, shipping and trucking companies' stocks to benefit.

Another result of low oil prices? Soaring demand for oil—in fact, the fastest-paced growth in five years, according to the Paris-based International Energy Agency, which advises industrialized nations on energy, adding that the surge is likely to continue into 2016. Global oil demand is expected to grow by 1.7 million barrels a day in 2015, the IEA predicted, revising its forecast upward in September and August, and predicting demand would rise a further 1.4 million barrels a day in 2016.

In the U.S., consumers are demanding more petroleum products than they have in years, with sales of gas-guzzling SUVs and trucks soaring. During the summer driving season, auto sales nearly doubled expectations, putting them on course for the best sales year in a decade, according to research firm Autodata Corp.

Still, the high demand has been unable to sop up the rising glut in global oil supply. The feverish pumping of oil, fed by the U.S. shale boom, has led to a "staggering" global oversupply of 3 million barrels a day, the IEA estimated this summer, the largest "overhang" since 1998.

Oil production in the U.S. will hit 9.22 million

barrels a day in 2015—the highest level since the nation's all-time peak in 1970 when it pumped 9.64 million barrels a day, according to the Department of Energy's statistics arm, the EIA. Next year is expected to be the first time the U.S. decreases year-over-year production since 2008, says EIA's Hess.

The frothy supply situation is unlikely to be helped by what appears to be a three-way fight brewing in the oil-rich Middle East among Saudi Arabia, Iraq and Iran, which are vying for market share by pumping more oil. After its landmark nuclear deal in July, Iran will strive "to reclaim its spot as the Organization of Petroleum Exporting Countries' biggest producer after Saudi Arabia," the IEA predicted.

Last November, Saudi Arabia, OPEC's de facto leader, made clear it would not cut its oil production to boost prices, ramping up oil production to make up for lost revenue from the

falling prices. By late August, OPEC, as a group, issued a bulletin stating that it "stands ready to talk to all other producers" in hopes of cementing "fair and reasonable prices." In the past, OPEC has sometimes cut production to increase the scarcity of oil and goose prices higher, but it

**"YOU DON'T PAY SO
MUCH FOR GAS,
SO YOU BUY A TV."**

is unclear whether it can achieve the consensus to do so now. Already, non-OPEC countries are expected to slash supply, according to the IEA.

While scaling back energy projects in the U.S., along with high demand for energy encouraged by low prices, may push prices back up by late 2016, "many participants in the oil industry have adopted a new mantra: 'lower for longer,'" the IEA said.

Could the price on a barrel of oil touch the \$20s—a level not seen since 2002? Most don't think so. "Events have been set into motion on the downside that are likely to keep prices low for a while, but I am not in the camp that says we're going into the \$20s," says Jim Ritterbusch, an energy analyst at Ritterbusch & Associates in Galena, Illinois. "I can see the low-to-mid-\$30s, but the \$20s will be quite a bit of a challenge." ■


Names in the News

UP, DOWN AND SIDEWAYS


[@WisdomWatch](#)



JIMMY MORALES

 TV comedian wins first round of voting in Guatemalan presidential election after resignation and arrest of former president, who is facing corruption charges. Morales is favored to win runoff. Meanwhile, in the United States, there's an actual joke polling at 32 percent in the Republican primary.

SUPERHENG

 A line of about 100 boulders buried not far from Stonehenge discovered through electromagnetic radar imagery. Researchers are calling it a supersized version of Stonehenge, aka McStonehenge.



STRANGE TRIPS

 Homeopath conference in Germany ends when 29 people accidentally take "LSD-like drug" and are rushed to hospital. Some suspect foul play. One victim called the incident "not groovy at all, man."



QUEEN ELIZABETH II

 Is now Britain's longest-reigning monarch. She beats out her ancestor Queen Victoria, having reigned for 63 years, exactly 63 years more than the longest reigning American monarch.



BELGIAN FARMERS

 Thousands of protesters angry about falling prices for agricultural products pelt police with eggs. Police officials responded with a two-word statement: "Food fight!"



WEST POINT

 Annual pillow fight turns bloody: four concussions, one broken leg, two broken arms, one dislocated shoulder and several broken ribs. Said one cadet: "Just wait until we get our hands on some drones."





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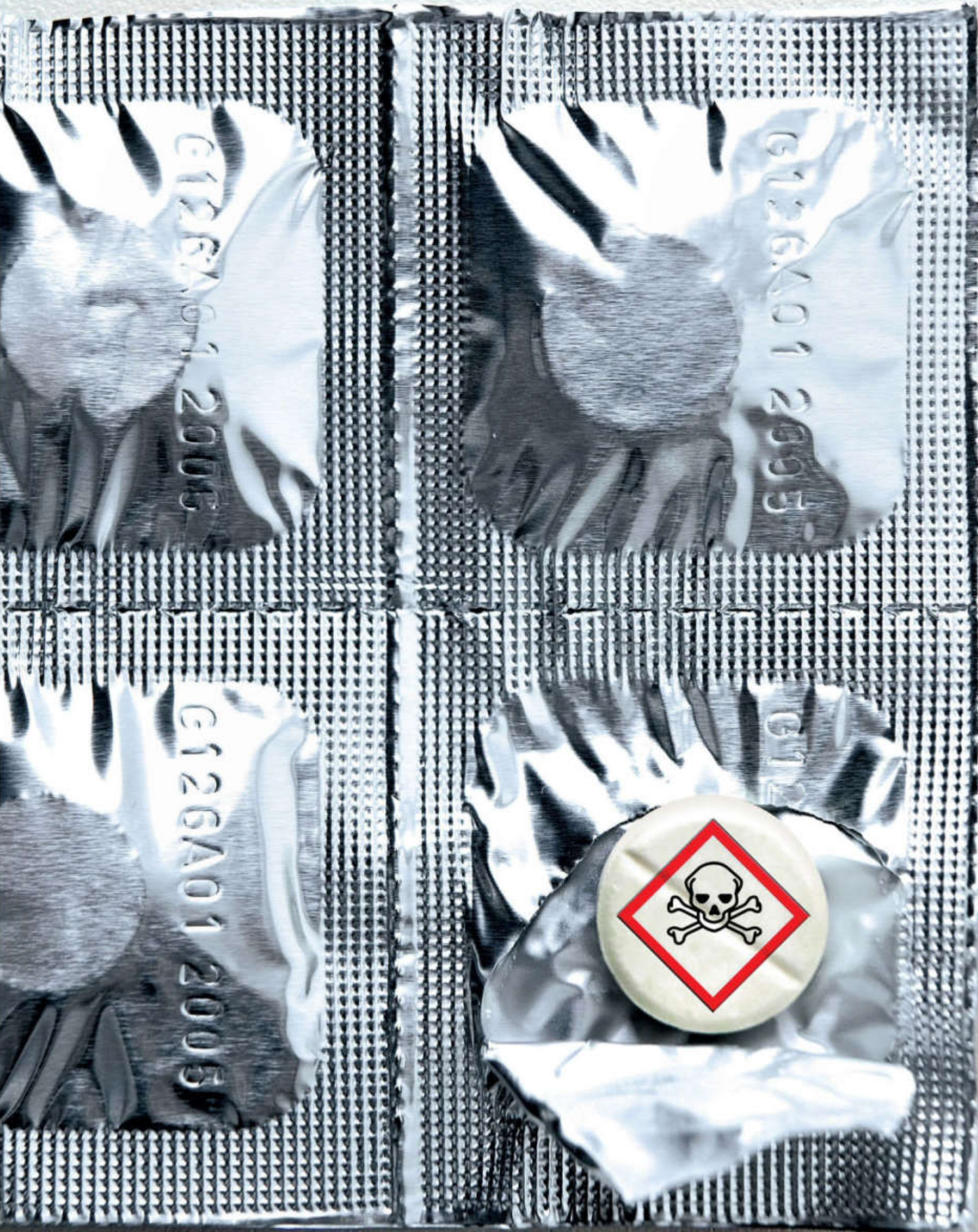
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By Alexandra Ossola
(@alexandraossola)



The Fake Drug Industry Is Exploding, and We Can't Do Anything About It

A fractured regulatory system hampered
by Big Pharma's meddling has led to a growing
global falsification market





IN THE MID-2000S, Myanmar saw between 500,000 and 600,000 cases of malaria every year. So it wasn't surprising when, in February 2005, a 23-year-old man in Myanmar came down with a fever, nausea, chills and a headache so severe he had to be taken to the local hospital. His doctors quickly determined he was, in fact, stricken with malaria. They prescribed him artesunate, an inexpensive anti-malarial regularly used by Myanmar's health care professionals to treat the infectious disease.

Typically, a patient's symptoms will subside after a few days on the drug, but this young man grew much worse. He slipped into a coma, his kidneys showed signs of failing, and the concentration of malarial parasites in his blood grew higher. His doctors tried to give him fluids and a more powerful dose of artesunate injected into his bloodstream, but they were too late. The infection spread to his brain and killed him.

Because artesunate is safe, generally well-tolerated and highly effective, hospital investigators decided to probe the case to try to understand what might have gone wrong. They were shocked to discover that the artesunate given to the patient had only 20 percent of the active ingredient required to kill the parasites. The drug, in other words, was a fake.

In the small village, word spread quickly of the tragedy, and community leaders were distraught. No one in their small town had ever died from a fake drug before—at least, not that they knew of. Fearing the threat of other preventable deaths, they collected all the artesunate from the hospital's supply, went out to local

pharmacies and pulled any other suspicious artesunate from the shelves, and then publicly burned it all.

Tragic incidents like this happen all over the world and with almost every type of drug. In Pakistan, a poor-quality tuberculosis drug killed 100 patients at a Lahore hospital in 2012 by triggering severe adverse reactions. In 2013, officials in India discovered that 8,000 patients died over a five-year period in a remote Himalayan hospital because an antibiotic used to prevent infection after surgery had no active ingredient. And in May this year, the World Health Organization (WHO) issued a warning about expired meningitis vaccines being sold in West Africa—a devastating blow to those trying to slow a viral outbreak in the region.

Every type of drug is susceptible, from anti-malarials to vaccines, antibiotics, HIV treatments and even Viagra. At their best, falsified drugs have none or too little of the active ingredient; at their worst, sellers are providing hospitals and patients with “drugs” that are life-threatening poisons.

“These falsifiers are in fact murderers—they are causing death,” says Jim Herrington, executive director of the Gillings Global Gateway at the University of North Carolina's Gillings School of Public Health. “And you're more likely to get prosecuted for counterfeiting a Gucci purse than a drug.”



Every type of drug is susceptible, from anti-malarials to vaccines, antibiotics, HIV treatments and even Viagra.

Internet Roulette

TASK FORCES are finding more fake drugs every year. Interpol's flagship pharmaceutical investigation, Operation Pangea, for example, says it seized 2.4 million fake and illicit pills in 2011; in 2015, the total number of pills and other medications that officials seized jumped to 20.7 million.

That's either good news or a terrible harbinger of what's to come. It might be the case that officials finally know where to look for fakes and are just now catching up to the crooks. Though public health officials have known about falsified pharmaceuticals for decades, they didn't understand the extent of the catastrophe until they started collecting real data in the early 2000s. For example, Interpol's pharmaceutical crime unit wasn't even founded until 2005.

On the other hand, many experts believe that the problem is on the rise and that more criminals are turning to pharmaceuticals for a simple reason: low risk and high reward. “The penalties are relatively weak for trading in falsified pharmaceuticals compared to those for trade in narcotics and human trafficking,” says Paul Newton, a professor of tropical medicine at the University of Oxford medical school who has spent decades tracking poor-quality medicines. And criminals can make a lot of money by falsifying drugs that are in high demand, in short

supply or are exorbitantly expensive for consumers.

"We've seen it happen regularly—if a shortage occurs, hospitals and clinics will step outside the normal supply chain, and the [criminals] exploit the situation," says Michael Deats, a group lead for the WHO's Department of Essential Medicines and Health Products. Meanwhile, different organizations over the past few years have estimated that anywhere from 100,000 to a million people die every year due to falsified drugs. This number has likely risen over time, echoing what experts assume to be a rise in the number of fake drugs in circulation. But it's impossible to know for sure, in large part because it's so difficult to know that it was, in fact, a fake drug that killed someone. Maybe the diagnosis was wrong. Or maybe a quality drug was administered too late.

The global pharma industry has complex networks that crisscross the globe. A single pill might pass through a dozen countries during its manufacturing process, which offers many opportunities for criminals to put fake drugs into the supply chain. For example, chemicals synthesized in China can be combined with fillers in India and then packaged in Mexico before being shipped to a pharmacy in Canada. Often, fake-drug-trafficking criminals have extensive international networks. In 2013, a Puerto Rican man was sentenced to two years in prison for selling hundreds of thousands of fake pharmaceuticals online. He was the American contact for a counterfeit drug ring headed by Bo Jiang, a Chinese national who was last seen in New Zealand before he went on the run from officials.

The international nature of the fake-drug trade is what makes it such a difficult problem to manage. "Very few of the 196 countries in the world have a specific dedicated service to deal with pharmaceuticals," says Aline Plançon, the assistant director of Interpol's program fighting counterfeit medical products and pharmaceutical crime. "Others can't enforce their laws because they don't have the capacity or budget."

When pharmaceutical components arrive at each new country, in most cases enforcement agents check a drug's paper trail to ensure legitimacy and spot-check the packaging, as well as its chemistry and appearance. But criminals often use falsified papers to sneak their fake drugs through checks, and the WHO estimates about 30 percent of countries worldwide don't have a functional drug regulation agency equivalent to the Food and Drug Administration (FDA) in the U.S.

Not surprisingly, these countries are more likely to be relatively poor, with underfunded and understaffed governments. With limited government oversight, officials in these countries sometimes accept bribes. A 2014 report published by the Independent Joint Anti-Corruption Monitoring and Evaluation Committee found, for example, that in Afghanistan, Ministry of Public Health officials "solicit bribes for

activities outside their departmental mandates with little chance of being detected." In China, an official was executed in 2007 for accepting bribes to approve untested medicines.

Even in wealthier countries like the U.S. and the United Kingdom, where drugs are tested frequently, fakes can slip through, often when patients or clinicians buy them over the Internet. Studies show that about 90 percent of drugs purchased online come from a different country than what the website claims, and Internet pharmacies often buy drugs from countries with lax regulatory systems.

The majority of drugs purchased online are sent through the mail. Most of these shipments are subjected to standard border control mechanism, including X-rays and drug-sniffing dogs. If there's a reason to believe a specific shipment is likely to have fakes—for example, if officials have received reports that certain drugs have been falsified recently, or if the paperwork seems suspicious—customs agents are more likely to open the packages and inspect their contents, according to a spokesman from the National Intellectual Property Rights Coordination Center (NIPRCC), one of the government agencies involved in U.S. customs protection.

But neither the FDA nor U.S. Immigration and



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POISON PILLS:
Brigadier
General Long
Sreng looks
through confiscated fake
medicines in
Phnom Penh,
Cambodia,
November 28,
2014.

Customs Enforcement could tell *Newsweek* what percentage of these drugs are actually checked or confiscated every year. Even if they find something amiss, there's no guarantee they'll seize the product—seizures involve a 25-step process of testing and investigations, the NIPRCC spokesman says, and they are costly in time, manpower and resources. So officials seize drugs only if they are both suspicious and likely to affect a large number of people. "Seizures happen if there's a lot of a product, often thousands of dollars' worth," the NIPRCC spokesman adds.



If there's not enough of a product to conduct a formal seizure, officials set the package aside and send a letter to its intended recipient saying that officials suspect that this product contains fakes and that, if he wants the shipment anyway, he assumes the risk of its contents. If the recipient contacts officials in response to the letter, they will ask questions about where the drugs were purchased so that customs agents can more effectively monitor future shipments. According to the FDA, screening and evaluation programs like these have led its Office of Criminal Investigations to arrest more than 400 people over the past two decades.

The system is far from foolproof. In 2011, for example, the FDA received reports that customers who had ordered drugs like Ambien, Xanax and

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SNAKE OIL GOES GLOBAL: A Chinese policeman walks across a pile of fake medicines seized in Beijing. China is believed to be the biggest source of fake medicines in the world.

Lexapro online instead received pills of Haldol, a potent antipsychotic. According to the FDA, "These customers needed emergency medical treatment for symptoms such as difficulty in breathing, muscle spasms and muscle stiffness."

Big, Dirty Pharma

STOPPING THIS SCOURGE would at a minimum require a great deal of cooperation among more than a handful of nations. Amir Attaran, a professor of law and medicine at the University of Ottawa, suggests an international treaty whereby countries would all agree on a set of laws. Attaran compares it to the aviation industry: "There are dozens of treaties on civil aviation, and every single country is following those.

AFP/GETTY



"You're more likely to get prosecuted for counterfeiting a Gucci purse than a drug."

If not, they don't fly." To raise the standards for pharmaceuticals worldwide, Attaran says, we need a similar system that penalizes countries that don't enforce medicinal quality controls.

The closest protocol now is the Medicrime convention: Since 2011, countries have been able to sign the informal treaty to criminalize pharmaceutical fraud within their borders. But countries aren't under much pressure to pass more formal legislation or to enforce the statutes of the convention. And in fact, they often have incentives not to. Some countries, like India and Brazil, are dragging their feet on international enforcement regulations because poor-quality pharmaceuticals make up such a large part of their economy, Attaran says.

Others are trapped by policies that conflate fake

and counterfeit drugs. Counterfeit drugs are those that infringe on a patent registered by the pharmaceutical company. Counterfeit Viagra, for example, might contain the same ingredients as the legitimate drug, but Pfizer didn't authorize the pill's production and doesn't get a cut of the profits. Counterfeit drugs don't necessarily endanger people's lives—they're more a threat to Big Pharma's bottom line than anything else. From a public health perspective, falsified drugs are the real menace, as they kill thousands of unsuspecting people around the world each year. But in countries where policies do not adequately distinguish between the two, enforcement agencies have to spend their limited resources cracking down on minuscule intellectual property infringements instead of tracking down cartels falsifying drugs.

The WHO is in a unique position to resolve the issue. The organization hosts and mediates the conferences in which countries meet to discuss what they can do together to reduce the number of falsified pharmaceuticals reaching patients. It also is the central clearinghouse for reports of fake drugs across the world. But, to date, the organization has declined to push countries to sign fake-drug-related treaties and has not taken a strong stand on separating out the public health issue of falsified drugs from the counterfeit concerns of manufacturers.

The WHO has used and will continue to use the term "substandard, spurious, falsely labeled, falsified and counterfeit"—SSFFC—to talk about the larger public health issue, Deats says, "until member states agree on a universal definition." But Attaran and others say that this is really because the WHO doesn't want to alienate Big Pharma—a close partner and financial supporter.

"The difference between falsified and counterfeit drugs seems trivial, but half the reason the world isn't doing more about pharmaceutical crime is precisely because of this language," Attaran says. "Pharma companies, at least dirty ones, have tried to expand the fight against falsified drugs to protect their intellectual properties, and that's just wrong."

A year ago, Attaran was working as a consultant for a project on falsified pharmaceuticals with the United Nations Office of Drugs and Crime. At one point, he says, he was ordered to make sure they would also go after intellectual property cases by someone working at Sanofi, the French pharma giant. Sanofi had explicitly co-sponsored the project through its nonprofit subsidiary, the Institute of Research Against Counterfeit Medicine. (An IRACM spokeswoman confirmed that the organization was founded in 2010 at "the instigation of Sanofi" and that it continues to receive funding from the company.) Attaran withdrew from the project for ethical

reasons, and it continued on without him. In December 2014, several member countries sent letters of complaint to the UNODC because its policies linked counterfeit and falsified medicines.

Big Pharma has a lot of sway with the international organizations working to keep drugs safe. The IRACM, for example, partners with a number of global regulatory groups in addition to the U.N., like the World Customs Organization and Interpol. And



in recent years, the WHO has been accused by journalists and nonprofits of falling under the influence of Big Pharma after accepting donations from organizations explicitly funded by it; in 2007, *The BMJ* published an article exposing the fact that a \$10,000 donation to the WHO was made by pharma giant GlaxoSmithKline, laundered through the nonprofit European Parkinson's Disease Association.

Asked about the WHO's relationship with pharmaceutical companies, Deats says that in order to combat SSFFC drugs, all kinds of stakeholders need to collaborate on every scale. "That means working with public sector, private sector, health care professionals, civil society and law enforcement." Ultimately, he says, the WHO should not be responsible for a legal framework. He sees his organization as a facilitator, a means through which countries and health care professionals can communicate when they find fake drugs. But the legal framework as well as the enforcement of those laws, he says, are out of the WHO's hands—and up to individual countries.

There is one group acting as an international regulator for fake drugs. In the past seven years, Interpol's Operation Pangea has led to the seizure of millions of packages of falsified drugs, many of which were sold online. This is always touted as a great example of successful international collaboration—one Pangea bust in 2014 involved authorities

from 111 different countries, according to an FDA press release at the time.

But those numbers are deceiving, Attaran says. "What Interpol never tells you is that well over half the medicines they seize in Pangea operations are from only a few countries, such as the United Kingdom, the U.S. and France"—countries that already have strong regulatory and enforcement systems. "It's really an isolated few national efforts stitched together by Interpol to create the illusion of a grand global effort [against falsified pharmaceuticals], which doesn't exist." That leaves poorer countries vulnerable, he says, and keeps those in wealthier ones just satisfied enough that they don't feel the need to clamor for more dramatic action.

Plançon says Interpol is doing the best it can to divide its limited manpower between wealthy and poorer countries, while figuring out what unique approach each area will require. For example, on a recent visit to Guinea, Plançon helped authorities decide that the best use of their resources was to beef up their FDA equivalent instead of conducting a one-time bust of fake drugs.

Cellphone Salvation

THE BEST WAY to catch a fake is to send samples to a lab where researchers can do tests. But even lab tests are not 100 percent accurate, and in low-income countries, sending thousands of samples to a lab is slow and prohibitively expensive. There are handheld mass spectrometers (a tool used to analyze the chemical makeup of foods, pharmaceuticals, etc.), but they are new, unproven and costly.

That's why scientists and tech innovators are working on getting cheap and effective solutions that can make a difference locally. The CD-3 is one promising example; it's a handheld device invented by the FDA that emits ultraviolet and infrared light onto pills and their packaging to determine if they are genuine. It's intuitive to use, relatively inexpensive at \$1,000 per device and surprisingly effective.

In 2012, Patricia Tabernero, then a researcher at the Worldwide Antimalarial Resistance Network, a global project tracking falsified anti-malarials, was in Laos looking for fake drugs. At the time, Laos was on the brink of a health crisis because fake drugs were making diseases, especially malaria, more resistant; drugs with too little of the active ingredient kill some of the bacteria but leave the hardiest in the body to multiply and then spread.

Tabernero and her colleagues decided to try out the CD-3, in what would become the first field test of the device, in a developing country. First, they needed to collect sample drugs from as many pharmacies as possible in southern Laos. But they didn't want to tip off the pharmacists, who might skew their sample by giv-

PHALSE PROMISES: A sign for a Macau, China, drugstore assures customers there are no fake drugs being sold in the shop. But retailers often have no clue what's real and what's not.

ing the researchers more or fewer suspicious drugs, or even alert local criminals involved in manufacturing the fakes. So Tabernero and her European colleagues enlisted local volunteers to enter the pharmacies and ask, "I would like to buy some drugs for my friend who is sick. We are traveling and work in construction. May I see which ones you have?"

In just four weeks, Tabernero's team collected anti-malarials from 144 private drug outlets. In the evenings, she tested the samples in her hotel room using the CD-3. The results were encouraging: The local officials caught on quickly, mastering the device in just two days of training. And it worked well. They shipped all the tested pills to a U.S. Centers for Disease Control and Prevention lab for chemical analysis, to see how well the device did, and it was nearly 100 percent accurate for all the samples it tested.

But the CD-3 could evaluate only 35 percent of the samples. To see if a drug is legitimate, the instrument needs to compare it with a genuine example, which regulators may not have if the drug is rare or if the manufacturer changes the formula without warning. This is especially true in a developing country like Laos. So far, officials don't have access to a universal registry of packaging; if the CD-3 is going to become more popular and used worldwide, agencies like the FDA will need to form stronger partnerships with manufacturers to make this universal registry a reality.

In the meantime, other low-tech solutions are helping consumers in developing parts of the world protect themselves. The widespread use of cellphones has helped: Legitimate drug manufacturers are starting to design packaging with scratch-off codes that a consumer texts to a special phone number. They then receive an automatic response confirming whether or not the drug is genuine. This has promising initial results—so far, Herrington says, no falsifier has been able to hack this system. But in the long term, experts agree, this solution is not ideal because it doesn't strengthen the regulatory system, as the CD-3 does. And without a strong regulatory system, falsifiers can't be caught.

That's also why, ultimately, the problem will be fully solved only when large importing countries like the U.S. adopt stronger legislation and insist that their trade partners do the same. "If they don't want to play by the rules, within five years their access to the U.S. market is gone," Attaran says. Take India, for example. Indian manufacturers are currently responsible for 40 percent of the generic drugs in the U.S., and recently they have come under increased scrutiny due to lapses in quality and regulation. The FDA could place sanctions on the country or ban the import of all drugs "until India cleans up its act," Attaran says. The agency could provide a five-year grace period,

he adds, to allow American drug companies to find trustworthy facilities and continue manufacturing to prevent drug shortages domestically.

The U.S. is not immune to fake drugs, of course. In 2012, hundreds of cancer patients took what they thought was Avastin, a monoclonal antibody, only to learn that their drug lacked the active ingredients. This past April, the FDA received reports of fake Botox in clinics all over the country. The FDA has a website warning consumers against fakes known to be in the drug supply. The government regularly files lawsuits against online pharmacies and their collaborators, charging them with drug trafficking, smuggling, counterfeiting and money laundering.

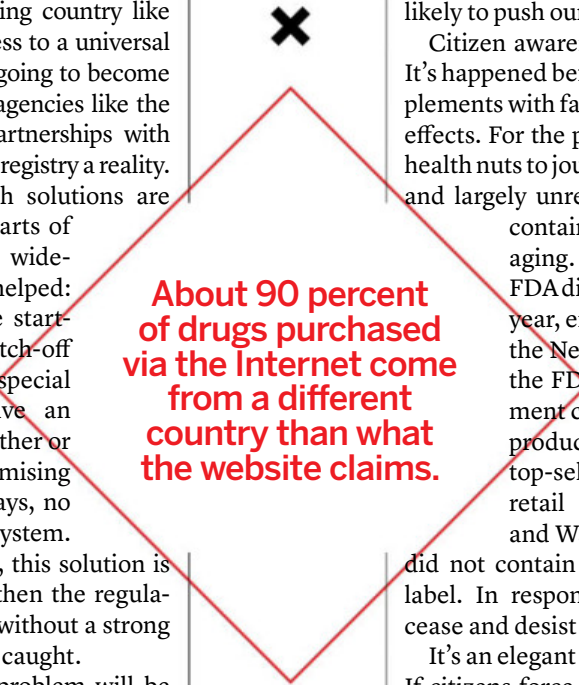
Nevertheless, one of the reasons the U.S. hasn't taken stronger international action is that most citizens don't know the problem is so pervasive. Americans enjoy some of the strongest regulatory and enforcement systems in the world. Despite the occasional problematic batch here and there, what consumers buy at their local pharmacy in the States is probably genuine, which means Americans are less likely to push our leaders to make changes.

Citizen awareness could make all the difference. It's happened before, most recently with dietary supplements with false claims about their ingredients or effects. For the past few years, people ranging from health nuts to journalists have decried the ineffective and largely unregulated supplements, which often

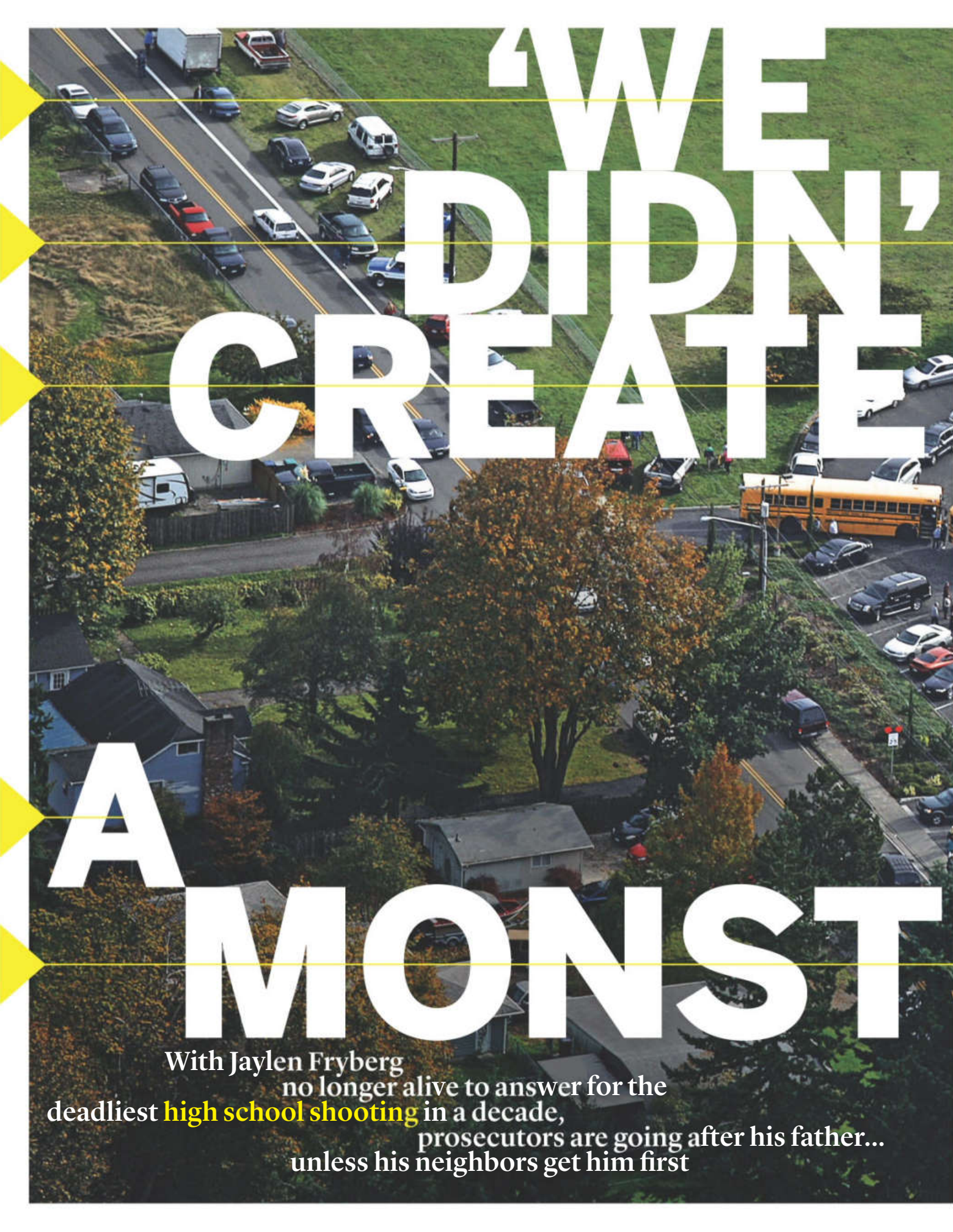
contain ingredients not listed on the packaging. But enforcement agencies like the FDA didn't do anything about it. Earlier this year, enforcement agencies finally gave in; the New York attorney general, along with the FDA, began to crack down on supplement companies selling fake or dangerous products. In New York, authorities tested top-selling herbal supplements at four retail giants —GNC, Target, Walgreen and Wal-Mart—and found that 80 percent

did not contain the medicinal herbs listed on the label. In response, attorneys for the state issues cease and desist letters to the retailers.

It's an elegant solution to a very complex problem: If citizens force the U.S. to play a larger role in the international conversation about falsified drugs, the drug supply would be safer within U.S. borders but would also extend far beyond. With the pressure on, countries would likely band together to share detection technologies, collaborate on a universal database of legitimate pharmaceuticals and pass international standards with real consequences. And that could quell rampant drug-resistant malaria in Laos, or save the lives of thousands of Sudanese citizens who thought they were safe because they got the meningitis vaccine but really were injected with little more than saline. **N**



**About 90 percent
of drugs purchased
via the Internet come
from a different
country than what
the website claims.**

An aerial photograph of a suburban neighborhood. In the upper left, a road is lined with parked cars, including a white van and a red car. A yellow school bus is stopped on the right side of the road. The neighborhood is filled with green trees and houses. The text 'WE DIDN'T CREATE' is overlaid in large white letters.

WE DIDN'T CREATE

A MONST

With Jaylen Fryberg
no longer alive to answer for the
deadliest **high school shooting** in a decade,
prosecutors are going after his father...
unless his neighbors get him first

An aerial photograph of a school building with a large crowd of people gathered in the parking lot and on the lawn. Several yellow school buses are parked on the left side of the building. The building has a grey roof and white walls. The surrounding area is green with trees and grass.

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ER'

BY MAX KUTNER

LOCKDOWN:
The Marysville shooting was over in seconds, but it took law enforcement a while to realize there was just one shooter, and that he was dead before they arrived.

BEFORE SUNRISE ONE MORNING IN JULY,

a day Ray Fryberg Jr. was scheduled to appear in court, someone smashed the windows of his car. He noticed the shattered glass on the pavement as he was leaving his home. He probably wasn't too surprised. A month earlier, he had awoken to find that someone had broken every window in his house.

Ray was once a respected member of the Tulalip Tribes, who occupy a reservation near Seattle. He worked for the tribal Natural Resource Department and led drum circles. But when he lost his teenage son Jaylen last year, the community turned on him. That sounds unspeakably cruel, but Jaylen's wasn't an ordinary death; he died in a murder-suicide that was the deadliest high school shooting in a decade, the second deadliest since Columbine. The tragedy was likely also the only major school shooting in which the killer solely targeted his friends. And the families of those friends he killed were Jaylen's cousins and neighbors. And, of course, Ray's.

As the families of those dead children crowdfunded funeral costs and distributed rubber memorial bracelets, Ray became a pariah. Locals blamed him for the deaths of the five young people, in part because it was his gun Jaylen had used. Ray lost his job. Friends and family grew distant or, worse, blasted his family in the press. At one point, Ray and his wife had to leave their home because of death threats.

Federal prosecutors also blamed Ray. They arrested him in March on charges of unlawful possession of a firearm. In July, they added more unlawful possession charges. (His trial was scheduled to start in late September.) In less than a year, Ray went from being a prominent tribal figure, known for preserving Native American traditions on a reservation that was rapidly modernizing, to Tulalip's most wanted. "It's sad that the government thinks they need to sadden this family any longer," says Ray's lawyer, John Henry



THE SEARCHERS: Local, state and federal law enforcement agencies swooped down on the school after the first 911 call; far right, Jaylen (far left), with his father (right), was an avid hunter, according to classmates, and posted photos to social media.

Browne. "They've been through enough."

A close family member says about the shooting, "People are entitled to be devastated, and we never wanted anybody to have to go through anything like that, but we had no idea what happened. We didn't create a monster."

▶ 'HE LOOKED SO LOST'

THOUGH SOME locals say Ray Fryberg's problems have been building for decades, his current troubles started on the morning of October 24, 2014, at Marysville-Pilchuck High School in Marysville, Washington. Jaylen had asked his friends to meet him for lunch. The cafeteria was noisy and smelled of cheap pizza as some 150 students buzzed around. Jaylen, 15, was dressed in all black and, as he often did, had his long dark hair parted down the center and tied into a bun concealed beneath a hat. Sitting with him were Shaylee Chuckalnaskit, Zoe Galasso, Andrew Fryberg (his cousin), Nate Hatch (another cousin), Gia Soriano, Keryn Parks (another cousin) and Carmen Lopez. It was the first of two lunch periods, and at Jaylen's request, some of them had cut class so they could all eat together.

As they chatted between bites, Jaylen stood up, began digging inside his brown-camouflage back-



“AFTER THAT FIRST SHOT YOU COULD TELL HE JUST NEEDED TO KEEP GOING. THERE WAS NO TURNING BACK AFTER THAT.”

pack and pulled out a Beretta handgun. He said nothing as, one by one, the skilled hunter calmly took aim at each of his friends and fired, working clockwise around the table until he emptied the clip. He shot Shaylee, Zoe, Nate and Gia once each and Andrew twice. He shot each of them in the head.

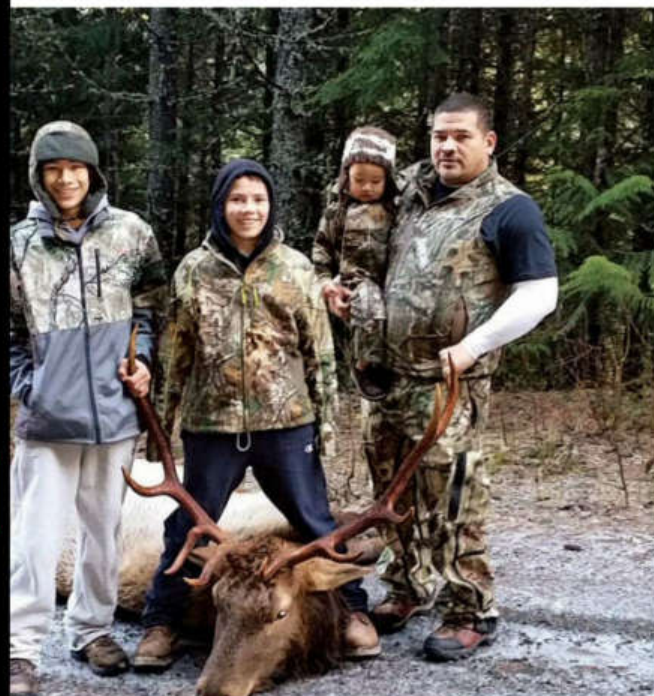
Carmen thought Jaylen had popped a bag of chips until she saw smoke. As he reloaded, she clambered over Shaylee and Zoe, who were on the ground, bleeding, and ran. Keryn dropped to the floor, unharmed, and crouched beneath the table while someone pulled the fire alarm. Students scrambled to evacuate, falling over each other, ditching their bags and lunches.

“I was in shock. I didn’t know what to do,” Keryn says. Then she saw blood pooling on the floor—and

Jaylen. “His face, it just looked so blank, and he looked so lost, you know? Like when you’re staring at something for so long and you’re just spaced out?... And after that first shot, you could tell he just needed to keep going. There was no turning back after that.”

Gia was on her side, still moving, and Keryn grabbed her hand. Nate was on his hands and knees by the table, clutching his jaw, where Jaylen had shot him. As Jaylen reloaded by the table, a social studies teacher raced over. Before she could stop him, Jaylen finished reloading and aimed the black barrel at his neck and fired. He was dead instantly.

A co-principal ordered the school on lockdown and darted between his office and the cafeteria, desperate to figure out if an active shooter was still on the loose. Kids hid in closets and fired frantic texts to each other and their parents, listening to helicopters over-



head. When police finally entered with bomb-sniffing dogs and guns drawn, they instructed everyone to put hands up and come out one by one. “We’re the good guys,” they said. “We’re here to help.”

Keryn refused to leave her dying friends until police pried her away and led her to a nearby classroom. Her first phone call was to Jaylen’s on-and-off girlfriend, who attended a different school. She refused to believe what Keryn was telling her and hung up on her. Then Keryn tried to calm her classmates. “Guys, we don’t need to go anywhere, he’s already dead,” she told them. “He shot himself. Shot all of them. There’s no more.”



► 'HE LOVED TALKING ABOUT HIS NEW GUNS'

SINCE COLUMBINE, only one high school shooting has been deadlier than the one at Marysville-Pilchuck, and a troubled Native American teen was the shooter there as well. In 2005, Jeff Weise, who lived on the Red Lake Reservation in Minnesota, killed his grandfather and his grandfather's companion, then seven people at his former high school and then himself. He had suffered from depression and bullying. His mother, who had a history of alcohol abuse, suffered brain damage in a car accident. His father had killed himself.

Jeff and Jaylen were both members of what Native American youth experts say is the population that experiences more violence than any other group of young people in the country. These youths are often the victims or witnesses of domestic and gang violence, sexual assault or bullying. The Justice Department says such exposure can lead to "altered neurological development, poor physical and mental health, poor school performance, substance abuse and overrepresentation in the juvenile justice system."

It can also lead young people to attempt suicide or

commit other acts of violence. Three-quarters of the deaths of Native Americans ages 12 to 20 are violent, and Native American teens die from suicide at a higher rate than any other group in the U.S. They experience post-traumatic stress disorder at the same rate as veterans who fought in Iraq and Afghanistan.

"There has to be a recognition that all of our children have been abused or neglected at some point," Theresa Pouley, the Tulalip Tribal Court chief judge, told a Justice Department task force in 2014. In Tulalip, she said, only half of the young people graduate from high school. Their life expectancy is 2.4 years lower than average, and they are twice as likely to die before they turn 24.

The Marysville-Pilchuck shooting happened just as the U.S. government was gearing up to confront Native American youth violence. In November 2014, the Justice Department released a report on children exposed to violence and issued recommendations. In December, President Barack Obama announced the Generation Indigenous initiative to fund and support Native American youth programs. In July, the White House hosted its first Tribal Youth Gathering. "We have to invest in them, and believe in

FROM LEFT: JASON REDMOND/REUTERS; DAN BATES/THE HERALD/AP (2)

them, and love them,” the president said in December, adding that the issue has brought tears to his eyes. “I deal with a lot of bad stuff in this job. It is not very often where I get choked up.”

When the president spoke of wanting to “cultivate the next generation of Native leaders,” he was speaking about kids like Jaylen, who grew up on the Tulalip reservation, which wraps around Tulalip Bay in the northwest corner of the country like a jagged bottle opener. A 50-minute drive north of Seattle, it sits on 22,000 acres that include a salmon fishery and a resort-casino that draws a lot of elderly Canadian

“SOME SHIT’S GONNA GO DOWN, AND I DON’T THINK YOU’LL LIKE IT.”

The reservation leads the county in heroin deaths. From 2003 to 2007, Native Americans in the county had twice as many deaths from injuries as whites, and nearly three times as many car accidents. And despite the chiming slot machines, the poverty rate on the reservation is more than double the U.S. average and four times the average for the surrounding county. The tribal government operates out of a gorgeous cedar building with waterfront views, but down the road are flimsy houses with bedsheets for curtains.

Locals remember Jaylen as among the best and brightest of their young people. He, like his father and grandfather, embraced his Native American traditions. He participated in drum circles and dances, paddled alongside his father in a regional event called Canoe Journey and posted a video of his traditional chanting. He proudly posted pictures of himself in feather headdresses.

A cousin says Jaylen’s father pushed him to be competitive in sports, and he played on the freshman football team and wrestled. He got good grades and had a big group of friends and a long-term girlfriend, with whom he even spoke about getting engaged. He was so popular that his classmates elected him homecoming prince. “He was a good kid...always clowning around, having a good time,” says a close friend, Mitchell Sawyer. “He always had a smile on his face. He was always great to be around.” A former wrestling coach at Jaylen’s school, Rick Iversen, told *The New York Times*, “This wasn’t the typical trenchcoat, introvert-type person.... This was an outgoing person that everyone in the school loved.”

There are hundreds of Frybergs on the reservation, but Jaylen’s immediate clan is a distinguished branch that has produced many local leaders. In addition to his father and grandfather at the Natural Resource Department and his grandmother as tribal CEO, his mother, Wendy, sat on the Marysville school district’s board of directors. “A lot of folks [thought] he would move up the culture ranks and become a leader,” state Senator John McCoy, a Tulalip member, told ABC News. “He had that kind of charisma and raw talent.”

Jaylen also had a passion for hunting. People close to the family say his father bought him guns for his birthdays, and he’d pose for photos with his bloody kills. In one photo, he stands beside what appears to be a gigantic felled elk, with his father on the other side, holding an infant, and his younger brother in the middle, straddling the carcass. They’re all dressed in



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THE HOMECOMING PRINCE: No one has come up with a clear motive for the massacre, although Jaylen had been sending cryptic messages for a few weeks prior, and had just broken up with his girlfriend.

tourists. Gaming money goes to the tribal government, then trickles down to social services that help keep the suicide rate lower than on some other reservations. Still, Tulalip Tribal Court Associate Judge Ron Whitener says, “these economies have only been going since the late ’80s, early ’90s. That’s not a long time to knock that snowball off its path down the hill.”



DRUMS OF MOURNING: Jaylen embraced his Native heritage, and his family was a respected and influential part of the Tulalip reservation.

camouflage, even the little one. Jaylen smiles wide and clutches the enormous antler in his left hand.

"He loved talking about his new guns," Keryn says. "He was a great hunter," adds Mitchell.

► 'MY FUNERAL SHIT'

STUDENTS IN Tulalip and Marysville get to choose which high school they attend, and the kids in Jaylen's group were excited that they could enroll together freshman year. Keryn even transferred into the school district so she could attend Marysville-Pilchuck, and Andrew begged his sisters to buy him hundreds of dollars of new school clothes. Shaylee loved her new school and never wanted to miss a day.

Jaylen, though, seemed to have trouble adjusting. Teachers later told investigators his grades had slipped because he would spend class with his head on his desk or playing on his phone. He missed fourth-period English 10 days in a row.

On October 13, a Monday, his classmates elected him homecoming prince, but an altercation nearly cut his reign short when he and a football teammate

got in a fight on Tuesday, before practice. Mitchell says the kid Jaylen fought had said that "Natives are a bunch of good-for-nothing slaves and that Natives don't deserve to live." So Jaylen "punched this kid in the face and gave him a bloody nose."

Also that week, Jaylen was acting differently toward his girlfriend, whose name police and reporters have withheld. "You've had a really short fuse with me lately," she texted him on Thursday, October 16. "You're not loving me lately like I know you know how." (She declined *Newsweek's* interview request, saying in a Twitter message, "I don't want to be involved in anything negative about my boyfriend and his family.")

That Saturday, before the homecoming dance, Jaylen and his friends met at the casino so their parents could take photos. Jaylen wore a red dress shirt, a black bow tie and sneakers. Some of the kids went in couples, including Jaylen and his girlfriend. After the dance, the group went to Jaylen's house. Two kids who were there say Jaylen's girlfriend got mad at him for flirting with another girl. The group left the couple alone to sort it out, but their arguing escalated, and

FROM LEFT: ELAINE THOMPSON/AP; CARMEN LOPEZ

“HE SHOT HIMSELF. SHOT ALL OF THEM. THERE’S NO MORE.”

it sounded as if the fight had turned physical. They then broke up. Early on Sunday, he went hunting. “I’m going to the woods to shoot something,” he told the girl.

At school on Monday, October 20, Jaylen appeared distraught. “That week, he was being weird,” Keryn says, adding that he was acting like a “psycho” about the breakup. Late Monday night and early Tuesday, he shot out a series of tweets:

*Alright. You fuckin got me....
That broke me 🙄🙄🙄*

*It breaks me... It actually does...
I know it seems like I’m sweating it
off... But I’m not... And I never
will be able to... 🙄🙄🙄*

An hour after tweeting that, when his ex wouldn’t respond, he wrote to her: *Just please talk me out of this and The guns in my hand.* She told him to leave her alone.

Ohk well don’t bother coming to my funeral, he texted her.

“I knew the breakup hit him hard,” Carmen says, “but he was always saying how heartbroken he was, and then the next minute he would be completely different.” Keryn says Jaylen and his girlfriend often broke up and got back together. For months he had flooded his Twitter page with those sorts of posts:

Fuck It !! 🙄🙄🙄🙄🙄

Might As well Die Now 🙄🙄🙄🙄🙄🙄💔💔

*Your gonna piss me off... And then some shits
gonna go down and I don’t think you’ll like it... 🙄🙄🙄*

I’m tired of this shit 🙄🙄🙄🙄🙄

I’m sooo fucking done!!! 🙄🙄🙄🙄🙄

On Wednesday, October 22, Jaylen and the girl continued arguing by text. He wrote: *I set the date. Hopefully you regret not talking to me.*

Then: *You have no idea what I’m talking about. But you will.*

And then: *Bang bang I’m dead.*

She asked him to quit texting her and stopped responding.

On October 23, one day before the shooting, he posted his last tweet: *It won’t last.... It’ll never last.... He*

also told his ex to make sure to read his texts the next day. He reminded her again early the next morning.

On October 24, 14 minutes before the first 911 call came in, Jaylen tried one last time to reach his ex. At 10:25 a.m. he sent a photo of a gun resting between his legs to one of the girl’s relatives and said, “Have her call me before I do this.” The ex called him at 10:27. She later told his father that during that two-and-a-half-minute call he said that even before their breakup “he was thinking about this. And when I asked him why, he said, ‘I don’t want to be here anymore.’” After the call, Jaylen texted his father, “Read the paper on my bed. Dad. I love you.”

Seconds later, he texted 14 or so family members a message titled “My Funeral Shit.” Cell records indicate he had started drafting the text the previous

day. He told his family to bury him next to Andrew and Nate, his soon-to-be victims, and in “brand new expensive as shit camo.” He said to apologize to his victims’ “parents and tell them that I didn’t want to go alone.... I needed my ride or dies with me on the other side.” He said Zoe, Gia, Shaylee and other friends might “get caught in this shit tomorrow.” His “last dying wish,” he said, was for his ex not to be with someone whose name police redacted in their transcript. He said his funeral “needs to be POPPIN!!” and told his family to play “Hot Nigga” and other songs and eat deer meat. He closed, “I LOVE YOU FAMILY!! I really do! More then anything. Tell [redacted] the same.

I needed to do this tho... I wasn’t happy. And I needed my crew with me too. I’m sorry. I love you.”

Two minutes later, at 10:39, the first 911 call came in. Investigators never found the paper Jaylen said was on his bed.

▶ ‘HE’S A MONSTER’

ON THE RESERVATION, not far from the casino, a Cabela’s superstore has 110,000 square feet of guns and outdoor gear. Replicas of two killer whales—the Tulalip symbol—hang from the ceiling, and bears, elk, a mountain lion and other big game decorate the walls and dominate a faux-rock display. Ray bought five guns there between January 2013 and July 2014. One of those, a Beretta pistol, was the gun Jaylen pulled out of his backpack in the Marysville-Pilchuck cafeteria. Ray had kept it in the center console of his pickup truck, along with extra magazines.



LAST SELFIE: Carmen Lopez, right, who was at the table where the shooting occurred, says he seemed fine when she took this picture the day before the tragedy.

Owning guns isn't unusual on the rez, but Ray had an order of protection against him that federal prosecutors say prohibited him from having any. Police arrested him for the Beretta in March, and prosecutors added charges for nine more guns in July, for a total of six counts. He faces up to \$250,000 in fines and 10 years in prison for each count.

Ray pleaded not guilty and has been out on bail, awaiting trial. His lawyer says the Tribal Court never informed Ray that under the order of protection he couldn't own guns.

The order is from 2002. Lawyers for a woman whom court documents identify as J.G. Fryberg, a former girlfriend with whom Ray has a child, said he "had recently threatened her and had in the past physically assaulted her by hitting, slapping and/or pulling her hair." The court found him guilty of committing domestic violence, and the order had no expiration date. (The Tribal Court declined to release

"THERE HAS TO BE A RECOGNITION THAT ALL OUR CHILDREN HAVE BEEN ABUSED OR NEGLECTED AT SOME POINT"

Ray's lawyer dismisses these comments. "There are animosities that go back for generations," he says. "You're going to find bad people in Indian Country that say bad things about other members for no reason whatsoever other than just history."

A police report says Ray kept his guns in a safe in Jaylen's bedroom. But people close to the family say Ray's role in Jaylen's violent death may have involved more than just easy access to firearms. Rich

Miller, grandfather of victim Zoe Galasso, says he heard about possible abuse from law enforcement soon after the shooting. "They made it very clear [Jaylen] came from a very, very abusive home. And they really stressed that part," he says. (A county sheriff's department spokeswoman would only say she would be surprised if someone involved in the investigation shared those kinds of details with a victim's family.)

Browne calls the allegations that Jaylen was abused "tabloid shit" and "absolutely untrue," adding, "He was very well loved. For godsakes, he was a star student. You don't become a star student if you're the victim of child abuse."

► 'WE BELONG TO THIS WEIRD CLUB'

WHEN MARYSVILLE-PILCHUCK reopened a week after the shooting, locals lined the sidewalks to welcome the students back. Mourners erected an impromptu memorial along the school's fence. The Seattle Seahawks and other pro sports teams offered students tickets to games and visited the school. Officials from other sites of school shootings have offered guidance, including Newtown, Connecticut; Isla Vista, California; and Red Lake. A teacher from Columbine High School visited with Marysville-Pilchuck staff. "I feel like, yeah, we do belong to this weird club," says Deann Anguiano, the co-principal.

Zoe died first, then Gia, then Shaylee. Andrew clung to life for two and a half weeks and then he died too. Keryn and Carmen switched schools. Nate survived and has undergone surgeries. In their reports, paramedics said that when they asked Nate who shot him, he responded, "My friend." After a pause, he added, "He was like a brother to me." Two



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LOVED ONES:
Jaylen, who lured his friends to their death, left a note of apology, explaining that he "needed to do this," because he wasn't happy, and "I needed my crew with me."

documents pertaining to the case to *Newsweek*.)

"He may be standing in front of the crowd leading the drum song and looking like he's a spiritual person, but he does got skeletons in his closet," says Kristie Fryberg, Keryn's mother and Ray's cousin. When they were younger, Kristie says, "he just did a lot of bad things when he was drinking."

"He's a monster," she says through tears. "His son died, took his own life, and he's got to live with that. And I feel that that's things coming back on him for all the lives he took. He may not have killed somebody, but he killed people's spirits."



HEALING KIND:
School officials
struggled with
how to handle
the shooting and
aftermath in the
yearbook, but
decided to leave
Jaylen's class
photos in place.

weeks after the shooting, Nate wrote on Twitter, tagging Andrew: *I'm happy and thankful I'm alive but [what] is life without my best friend?*

As the one-year anniversary of the killings approaches, people still don't know why Jaylen did what he did. Gathering and then killing his closest friends is without parallel in modern school-shooting history.

For some in this shattered community, the unanswered questions about Jaylen's motive and mindset have made hating him difficult. Kids include his image in their memorial collages, his initials alongside those of the victims in their Twitter and Instagram profiles. "We miss your handsome face," someone posted online. Marysville-Pilchuck students have worn "Team Jaylen" T-shirts to school—apparently made years ago to support his struggle with diabetes—and Tulalip tribal employees have worn them to work, a local paper reported. "I forgive him," Keryn says. "He's my family. He's my blood."

The Marysville-Pilchuck staff faced a dilemma when considering how to address the massacre in the yearbook. They decided to include a special section with photos of the victims and accounts of the tragedy and its aftermath. They also chose to leave in Jaylen's alphabetized photo and pictures of him with the football team and as the school's homecoming prince.

While the feds grapple with the Native American youth crisis, Marysville and Tulalip have flown in mental health experts and hosted crisis intervention

trainings. The first one filled 30 spots and had a waiting list of 95. "Rather than putting our head in the sand and crossing our fingers and hoping and praying it never happens again, we're really trying to be proactive and focus on the things that we can control," says Stephanie Fryberg, an associate professor at the University of Washington who specializes in Native American youths' mental health. She lived next door to Jaylen's family but is not an immediate relative.

Those efforts at Marysville and Tulalip don't help the rest of Indian Country, which continues to lose its young people at a horrific pace. At the Pine Ridge Reservation in South Dakota, at least 11 young people have died from suicide since December, and 176 more have made attempts. The tribal president declared a state of emergency in February, and in June he said before the Senate Committee on Indian Affairs, "We are struggling. We simply do not have the resources to get out in front of this problem."

Marysville-Pilchuck closed its cafeteria after the shooting, and its windows are boarded up. The superintendent says a community survey found that most people felt they should tear down the cafeteria, and the district is awaiting funds to do so. "You hear it on the news all the time. I guess it was our—it was us this time," a cafeteria worker told police.

Greg Erickson, the school district athletic director, says, "I never want to go in there. I try not to look at it." **N**





NEW WORLD



WILDLIFE

CANCER

ENVIRONMENT

SPACE

INNOVATION

DATA

GOOD SCIENCE

A MAYAPPLE A DAY

Mass-producing a rare, endangered plant's cancer-fighting chemicals


HEALING POISON:
The mayapple naturally produces the cancer-fighting toxin only when it is attacked.

AN ENDANGERED species growing as high as 2.5 miles above sea level, the Himalayan mayapple is not an easy plant to get hold of. Yet humans keep trying, because the poisonous plant produces podophyllotoxin, a preliminary compound in etoposide—an essential medicine per the World Health Organization (WHO)—used to treat a range of cancers. Researchers have now identified the plant's genetic components, which make the key ingredient, and transplanted them into a cheap medium—meaning the drug could theoretically be produced at low cost and high scale.

Researchers from Stanford University noted that it was only when the leaf was damaged that podophyllotoxin was made, as a chemical defense against attack. So they punctured the leaves and watched as 31 new proteins appeared. Eventually, they produced the right 10-protein combo, which produced podophyllotoxin. Then they transferred these proteins into a common, cheap alternative plant. Ironically, they chose *Nicotiana benthamiana*—a close relative of the tobacco plant. Elizabeth Sattely, assistant professor of chemical

engineering at Stanford and the lead author on a new study published in *Science*, says the tobacco relative was used because it has been widely studied by plant biologists and is easy to engineer.

The goal is to grow the cancer drug in an even more scalable bioform: yeast, which is already used to produce artemisinin, WHO's recommended drug for treating malaria, and hydrocodone—a painkiller closely related to morphine.

Sattely says the enzyme-identifying technique pioneered in the study could be used to supply plenty of other essential drugs. For example, paclitaxel (sold under the brand name Taxol), which is used to treat ovarian, breast and non-small cell lung cancers, is derived from the bark and needles of certain types of yew tree. Approximately 20 pounds of dried bark are required to produce 2 pounds of Taxol—but each tree yields just 2 pounds of bark. “Many cancer drugs that are derived from plants have been very difficult to obtain in large supply,” says Sattely. “The ability to engineer easy-to-grow hosts to make these molecules could change that.” 

BY
CONOR GAFFEY
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DISRUPTIVE

STOP ROOTING FOR LAUNDRY

Fantasy leagues are about to get granular and may kill your passion for that favorite team

THE NFL and other professional sports leagues believe FanDuel and DraftKings are the most brilliant things to happen to fans since beer. Over time, though, these sites could alter the relationship between fans and teams in ways that might not be good for teams. The key will be an aspect of the sites that often gets overlooked: the flood of sports data they'll bring to the masses. We're talking mountains of data never before available to even the most ardent fantasy sports nuts.

We got a hint this summer about FanDuel's data-driven intentions when it bought numberFire, a startup that crunches data to predict how a player will perform in his or her next game. "Our ambitions have really broadened," FanDuel CEO Nigel Eccles told TechCrunch after the deal. "We've started to think of ourselves less as a fantasy sports business—we want to make sports more exciting."

But what "more exciting" means is different from what it used to mean. FanDuel isn't going to amp things up on the field or court or rink. Its mission is to make sports more exciting in our heads.

Let's back up a second, because a lot of people until recently hadn't even heard of daily fantasy sports, and then presumed it must be a frivolous game that unshaven men wearing sweatpants play on their phones while watching football all day.

Old-school fantasy sports leagues have been around for a long time. Millions of people play, but

the appeal is limited because traditional fantasy leagues are major time commitments, lasting the whole season. For the NFL, you assemble a fantasy team of players from all across the league in August. Statistics for your chosen players pile up through the season, and you find out in January if you won your league.

Daily fantasy is a new animal, built on a combination of cloud-based technology on mobile phones and a loophole in gambling laws that allows for prize money in games that take more skill than luck. FanDuel and DraftKings let people use an app to pick a fantasy team on a Sunday morning for a one-day league. By Sunday night, you know if you won. Similar one-day leagues are offered for almost every major sport.

This kind of quick-and-easy sports fantasy game for money is luring millions of new players and aims to be as mass market as Candy Crush. FanDuel's revenue was \$14 million in 2013, \$57 million in 2014 and is expected to top \$100 million this year. Sports leagues, teams and TV broadcasters love daily fantasy because they feel it gets fans more deeply involved. "The more people play, the more they consume our product on TV," Fox Sports President Eric Shanks told *Re/code*. So FanDuel's investors include NBC Sports, Comcast and Google, and its partners include the NBA and NFL teams like the Jacksonville Jaguars. DraftKings got funding from Fox Sports, Madison Square Garden and the NHL.

BY
KEVIN MANEY
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RECLINING FORTUNES: Compressing fantasy leagues into one-day competitions and offering prize money are changing the way fans watch and think about pro sports.

Now here's how the situation could spin in unpredictable ways. In fantasy sports, your team's score depends on how each individual player performs—with little to do with whether the real-life team won or lost. If you're a serious daily fantasy player, your interest is already leaning toward individual players, not teams.

Consider that FanDuel and DraftKings are rough versions of how they will work a few years from now. Today, you pick your fantasy team based on data that's not all that different from what's been available for decades. And that data can be pretty sparse, especially in football. So, for example, when you build a FanDuel team in football, you get to pick only a few key offensive players and, for defense, you pick a whole team's defense, because there's so little data about, say, a linebacker's performance.

The data part of the equation is changing fast. The NFL this season is putting sensors on players to measure things like speed and hits. A FanDuel user will have enough data on defensive players to accurately analyze individuals. We'll increasingly see inside the game as the data get more granular.

Keep in mind that the NFL is a data-laggard. The NBA and MLB have gone sensor crazy.

They're collecting data about every micro-movement of players and ball. The NFL and every other kind of sport will eventually do the same.

Most fans today get their sports through a TV screen. They focus on a team first and their favorite players second.

FANDUEL'S MISSION IS TO MAKE SPORTS MORE EXCITING IN OUR HEADS.

TV keeps sports at a distance, so we view the whole. Yet as the data-intensified game catches fire over the next few years, the interest of mass-market fans will increasingly become all about players' data. Teams will seem like a means to an end—a way for players to per-


form so they generate data.

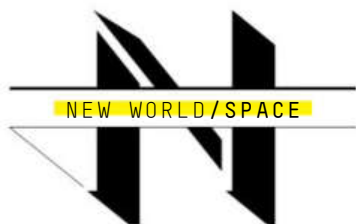
The next generation of fans could end up thinking the term "favorite team" is as weird as something like "favorite record label." Instead, we'll be glued to individual players—or, more precisely, to the mountains of data that will be generated about every microsecond of every player's performance.

To take that to its extreme, we could arrive at a sports world where we don't even care what a player looks like; we'll just want to ogle his or her data.

The team thing has always been tribal—your city, your team and, for superfans, your identity. That gets complicated in a data-intense world where players matter more than teams. What happens in the stadium? What do people cheer for? Whose jerseys are in the gift shop?

And what kind of promotions does a team run? If we don't care what a player looks like, do we give a crap about his or her bobblehead? What replaces the bobblehead? Maybe it's a Dropbox file full of a favorite player's exclusive data.

But somehow, going to the stadium for Andrew Luck File-in-the-Cloud Day just doesn't seem the same. 



BELLY UP TO THE MARS BAR

Humans are getting ready to live on the red planet, on the slopes of a Hawaiian volcano

ZAK WILSON thinks that in the near future, there will be humans on Mars. He also thinks there's a pretty good chance he'll be one of them.

He's not a candidate for the Mars One mission, the plan that Dutch entrepreneurs have put forth to train and send regular citizen applicants on a one-way trip to Mars in 2026, nor is he a dreamer. He's a materials engineer who recently concluded an eight-month experiment to test what happens to humans during the type of long-duration space travel required to make it to the red planet.

The experiment was part of NASA's Hawaii Space Exploration Analog and Simulation, a series of studies to test how long-term isolation and confinement may affect crew psychology and team performance. HI-SEAS began in 2013, and three missions have been concluded; the fourth began on August 28 and will last for 365 days. (Twelve months is still far shorter than the length of a real expedition to Mars. Most actual mission profiles are 2.5 to 3 years long.) Each study puts six astronauts-to-be in an isolated 1,000-square-foot dome habitat, in living conditions that are as Martian as they can be on Earth: the slopes of the Mauna Loa volcano on Hawaii Island.

The Big Island, as it's often called, is barren, dotted with mountains and ridges covered in volcanic red rocks. As on Mars, "there are wide-open plains and a lot of craters," says Sophie Milam, an engineering graduate student at the University of Idaho and, at 27, the youngest

crew member on HI-SEAS's third mission. Then there's Mauna Loa—the largest volcano on Earth and believed to be second only to Mars's Olympus Mons in the entire solar system.

A major component of the experiments is exposing human guinea pigs to extreme scarcity. For example, they have access to only a very limited supply of water (each participant gets to shower seven minutes per week, max), and their food is exclusively dehydrated—unless they can come up with their own way to grow fresh produce. The crew from the recently concluded mission included a sustainability and indoor gardening expert, Martha Lenio, who managed to grow a few salutary tomatoes. They also are forced to endure the type of lackluster communication they'd experience on Mars. Sending and receiving email, for example, has an artificial 20-minute delay.

Though it's impossible to fully replicate the low gravity and the magnetic fields on the Martian surface, extravehicular activities, or EVAs, gave the researchers a taste of what exploring such a harsh planet would be like. "When you walk around in a space suit, it is very difficult judging where your limits are," says crew member Neil Scheibelhut. "You feel this force on you, and you are wondering why you are leaning that way, and suddenly you realize that this is the wind, but you can't feel it."

Each researcher involved in the mission reacted differently to confinement. Jocelyn Dunn, a

BY
LAURENCE CORNET





+

**UNEARTHLY
TERRAIN:** For eight
months, HI-SEAS
commander
Martha Lenio has
lived in a dome,
confined with five
other researchers
in the crater of
the Mauna Loa
volcano.

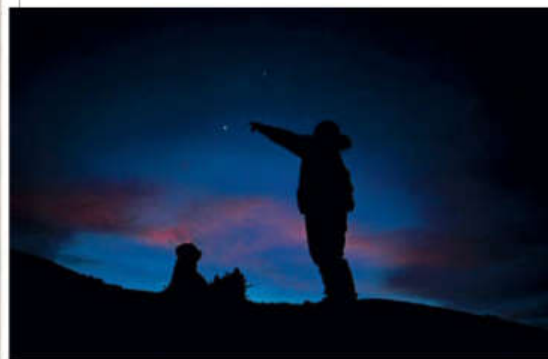
+

AT IT ALONE: Jocelyn Dunn, one of the HI-SEAS crew members, walks across a ridge atop Mauna Lao. The unearthly environment atop the volcano provides an ideal setting to monitor the psychological response of human beings to conditions of isolation.



Purdue University industrial engineering Ph.D. candidate, says she often found herself longing for just a few minutes entirely to herself. Most of the day is spent in the company of other team members, and the material used for the construction of the dome is so thin that even through a closed door, you can hear the team's activity outside. Spending so much time with such a small group can also create intense feelings of loneliness. "It's very isolated from the rest of the world," says Allen Mirkadyrov, a NASA aerospace engineer and


**"SIX PEOPLE IS
NOT ENOUGH TO
MAKE YOU FEEL
LIKE YOU ARE PART
OF A COMMUNITY
OR SOCIETY."**



crew member. “Six people is not enough to make you feel like you are part of a community or a society.” Then there were the prosaic, distinctly earthbound experiences they missed: the feel of sunshine on the skin, the smell of grass, the taste of steak and the songs of birds. “We haven’t seen any animal in eight months,” says Wilson.

In many ways, these varying individual reactions are the point of the experiment. Some physical and psychological challenges of long-term space travel are obvious (food, isolation),

but others are unpredictable until you get actual people out in the field—or, in engineering-speak, perform “analog research.”

“Mars is the ultimate sustainability project,” says Lenio. “Living on Mars means coming up with a way to recycle every single resource: air, water, food and even waste. We forget that we have to recycle everything because Earth recycles it for us, but on Mars you don’t have that luxury. So if we can figure out a way to do this on Mars, for sure it will have implications here on Earth.” 



RUN, RIVER, RUN

Preventing another disastrous Blanco flood means letting the destroyed riverbanks return to their natural state

RACHEL RANFT steers a mud-splattered pickup slowly along River Road, a narrow strip of asphalt a few feet above the now-placid Blanco River in Wimberley, Texas. She pulls up next to a towering bald cypress, a conifer native to central Texas that grows along creeks or near springs. This one measures about 100 feet high and 6 feet around. A tangle of debris wraps its trunk like a fibrous scarf, and rough bark dangles off it in long strips, the wood beneath smooth and pale. An equally large tree lies beside it, roots and all ripped out of the ground. Thousands of trees along the river recently suffered similar fates, victims of not only a flash flood but also the human penchant for manicured landscapes.

The Blanco River starts in springs in Kendall County, flowing 87 miles over limestone outcroppings in Hays County, through the towns of Blanco and Wimberley, before it empties its pale-green waters into the San Marcos River, which in turn flows into the Guadalupe and, ultimately, the Gulf of Mexico. Before the flood, most of the vacation cabins and year-round homes lining the river in Wimberley sported mown lawns, typically non-native St. Augustine or Bermuda grass, interspersed with large, mature cypress trees.

This landscape was ill-suited to withstand the flood, points out Ranft, a project manager for the Nature Conservancy (TNC). Unlike native vegetation, mown grass doesn't establish the root system needed to hold soil in place. Large,

solitary trees bear the brunt of floodwater and debris, while in a mix of tree sizes, smaller ones would bend rather than break, slowing the water and absorbing some of its force.

In this case, the force was considerable. Before dawn on Sunday, May 24, as much as 10 inches of rain fell in just a few hours in this river basin, onto land already saturated from weeks of steady precipitation. The river rose rapidly, cresting 27 feet above flood stage. A wall of water roared downstream, killing 13 people and destroying or damaging hundreds of homes around this tourist town about 38 miles southwest of Austin.

Wimberley residents immediately rallied, mourning those who had died, searching for the missing, feeding neighbors and cleaning up. But people here also immediately and keenly felt the loss of 60 to 75 percent of the riverbank's iconic trees, an estimated 13,800 specimens of cypress, pecan, cedar, elm and oak. "Within days of the [flood], while everyone was still dealing with loss of homes and material possessions and people still missing, people along the Blanco were concerned about the trees," says Paul Johnson, urban and community forestry program coordinator for Texas A&M Forest Service. Apart from their aesthetic beauty and shade—precious in an area where summer temperatures routinely reach the upper 90s—healthy trees reduce erosion, slow down typical flood waters, clean the air and provide habitat and food for wildlife.



BY
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"These trees were very important to quality of life, natural habitat and the tourism industry here," says Hays County Commissioner Will Conley. In 2011, the Guadalupe-Blanco River Authority sampled tree rings from cypress along the Blanco and dated one tree back to at least 1426—nearly 100 years before Spanish explorers arrived in what is now Texas. "Just think of all these trees have seen in that time," Conley says. The flood washed away the 1426-era tree.

The volume and velocity of the water forced trees from the ground, and the debris and gravel it carried knocked off limbs and scoured bark from trunks. This bark loss can be fatal. Tubes just beneath the bark carry nutrients made by photosynthesis in a tree's leaves to its roots. Loss of bark around the trunk starves the roots and eventually kills a tree—a threat faced by many of the cypresses still standing.

Following disasters such as this one, public and private landowners often immediately begin to cut down dead and damaged trees and clear out fallen limbs and other debris. But that, experts say, is the worst thing to do, because it could prevent the river from ever fully recovering. The branches, sediment and downed trees provide nutrients for vegetation to regrow and, in the meantime, help hold the soil in place. Debris contains seeds and surviving roots that might naturally revegetate the bank. The tangled piles also form a natural barrier that protects young trees from being eaten by the area's abundant

deer. Flooding is a natural river process, and nature has the ability to heal itself, given time.

In some places along the Blanco, it might be too late. There are areas here and there already cleared; in some cases, large circles of white ash suggest they were burned. And if heavy equipment was used, it might have irreparably damaged the shore, compacting soil and making it

A WALL OF WATER ROARED DOWNSTREAM, KILLING 13 PEOPLE AND DESTROYING OR DAMAGING HUNDREDS OF HOMES.

DEAD WOOD: The Blanco River flood killed 13,800 trees. Environmentalists say this is a chance to rebuild the riverbanks in a way that protects people and their homes from future natural disasters.



more difficult for plants to grow, or gouging the ground and contributing to erosion.

Ranft, Johnson and others are now educating landowners along the Blanco on best practices for the flood aftermath. TNC hopes to target landowners in high-profile areas who are willing to work with the organization to demonstrate to others what a natural riverbank looks like.

"We hope this can be a turning point for better management," Ranft says, that would create a landscape more resilient to future floods. A core tenet of that would be small areas of native grasses where people use the shore, as well as a variety of native vegetation and trees elsewhere, to replace the diversity that once naturally occurred along the river. This type of good land stewardship becomes increasingly important, says Laura Huffman, Texas state director of TNC, as the population continues to grow and as climate change makes more frequent and intense flood, drought and other disruptions the norm. "This flood was tragic on a human and an ecological scale," says Huffman. "But it is an opportunity to think differently about how we respond."

The tragedy may yield another benefit: "People are asking what to do on their land, inviting us in," says Ryan McGillicuddy, a Texas Parks and Wildlife Department conservation expert. Texans consider the right to do what they want on their own property sacrosanct, making such invitations hard to come by. And given that most of the land along the river is private, the potential to partner with local landholders will be key to returning the Blanco to a more natural state than it was pre-flood and, as Conley puts it, "repair properly for the next generation." ■



+
LOVELY INGRID:
Gregory Peck and
Ingrid Bergman,
who is honored in
a new photo book,
enjoy an ice cream
during a break in
shooting on the set
of their 1944 film
Spellbound.

CHRONICLE BOOKS/SCHIRMER/NOSEL



DOWNTIME

RELATIONSHIPS

MOVIES

DRINKING

BOOKS

TELEVISION

MUSIC

HERE'S LOOKING AT YOU, KID

Isabella Rossellini has taken to the road to celebrate the 100th anniversary of the birth of her mother, Ingrid Bergman

ALTHOUGH Isabella Rossellini has had a remarkable career as a model, actor, writer and director, it has always been hard to see her without recalling that she's the daughter of the great Swedish actress Ingrid Bergman, immortalized in classics like *Casablanca* and Alfred Hitchcock's *Notorious*. Upon first meeting Rossellini, director David Lynch—whom Rossellini would go on to date—infamously said, “Hey, you know, you could be the daughter of Ingrid Bergman!” Rossellini, though, has always celebrated her mother rather than seeing her as a shadow to run from, and this year she has embarked on a series of projects celebrating the centenary of her mother's birth.

One of Rossellini's former husbands, director Martin Scorsese, was instrumental in helping with her current endeavor—an ambitious series of international tributes. Speaking to *Newsweek* by phone from her farm on New York's Long

Island, Rossellini says that back in the '80s, Scorsese, “a wonderful film historian, was pushing for archives and restorational films” relating to Bergman's definitive works after her 1982 death. He put her in touch with Jeanine Basinger, founder and curator of the Wesleyan University Cinema Archives, with the goal of starting an extensive repository of photos, films, letters and other ephemera, funded by donations from friends and family, as a way to remember Bergman.

Over time, the collection grew into something “very, very vast,” Rossellini says. But for years, it just sat in the Wesleyan Archives, available only to collectors and historians. So Rossellini called up her friend, the German publisher Lothar Schirmer—whom she had met when he bought the German rights to her memoir, *Some of Me*—and proposed compiling a book about Bergman's life.

BY
PAULA MEJIA
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Published in late July, *Ingrid Bergman: A Life in Pictures* is an alluring treasure trove remembering the legendary actress, with over 500 pages of never-before-published photos tucked in between essays from former friends, lovers and collaborators, including John Updike and the photographer Robert Capa. Rossellini and Schirmer began working on the project in 2011, poring over the Wesleyan collection and Getty's archival images. At one point, they hunkered down in Munich with the intention of editing the book down, but within three days it had actually grown. "It came out to 565 [photos]!"

she says of their editing attempt. "And I asked Lothar, 'What do we do with it?' And he said, 'To hell with it, we're publishing it this way!' We referred to it as Mama's Bible."

The book opens with stills of Bergman's modest childhood in Sweden, the expressive toddler hamming it up for the camera. Film nerds will likely relish the behind-the-scenes photos leading up to her golden age of Hollywood days and her ascent to international stardom. (One of the most captivating images features Bergman with Gregory Peck, each mid-bite into ice creams.) The latter part of the book moves through her films and her much-publicized affair with—and

**"HEY, YOU KNOW, YOU
COULD BE THE DAUGHTER
OF INGRID BERGMAN!"**



LEFT: CHRONICLE BOOKS/SCHIRMER/MOSEL; RIGHT, FROM TOP: COLUMBIA PICTURES, TITANUS DISTRIBUTION; U.S. WARNER BROS.; MINERVA FILM; CINEWA 5; MGM

later separation from—Isabella's father, Italian director Roberto Rossellini. But it doesn't skimp on the lesser-known experimental projects Bergman explored in latter in life. The book ends on the days before she passed away from breast cancer, on August 29, 1982—her 67th birthday.

This fall, Rossellini is embarking on a tour to commemorate Bergman's life and to celebrate the book's release. On August 29, a Bergman retrospective opened at New York's Museum of Modern Art. (It wasn't the first tribute Rossellini helped organize at MoMA—back in 2006, she introduced some of her father's films for his retrospective.) It seems that Bergman gave some thought to just such a posthumous tribute many years ago; Rossellini says her mother had floated the idea many years ago of having each of her four children select three films and present them at a commemoration event. Her brother Roberto declined to come along, so Rossellini and her two sisters—Pia, from Bergman's first marriage to Dr. Petter Lindström, and her fraternal twin, Isotta—introduced a handful of Bergman's films at MoMA in late August.

The program featured *Casablanca*, of course, but other picks—such as the Roberto Rossellini-directed film *Fear* (1954) and a less-lauded Hitchcock picture, *Under Capricorn* (1949)—gave viewers a broader sense of Bergman's oeuvre. One movie on the program, 1941's *Dr. Jekyll and Mr. Hyde*, bucked Bergman's good-girl image. “Mother negotiated with Victor Fleming, the director, to play the naughty prostitute who is the victim of *Dr. Jekyll and Mr. Hyde*,” Rossellini explains. “[We wanted to show] films like that, which illustrated Mama's sense of adventure and desire for experimentation.”

In early September, Rossellini graced the stage of London's Royal Festival Hall with Jeremy Irons in a kind of theatrical tribute to Bergman. (The pair recently performed a similar show at the Brooklyn Academy of Music.) Rossellini read excerpts from Bergman's now-out of print 1979 autobiography, *My Story*, as well as letters between her and some of her more famous collaborators, notably Hitchcock and actor Joseph Cotten, of *Citizen Kane* fame. Rossellini's next European tribute will be in Paris, Bergman's longtime home, where she will be joined by friends Gérard Depardieu and Fanny Ardant to read seminal Bergman interviews and recount their personal memories of Bergman.

Rossellini will also screen previously unseen footage Bergman shot on the set of Roberto Rossellini's *Stromboli* and *Joan of Arc*, as well as home movies. “[‘The Chicken’] is an episode

SOMEWHAT LESS NOTORIOUS

FIVE INGRID BERGMAN FILMS
A BIT MORE OBSCURE
THAN, SAY, CASABLANCA



1 CACTUS FLOWER 1969

Bergman plays the nurse to a dentist played by Walter Matthau, though the two pose as husband and wife. Also present onscreen is the most 1960s-looking Goldie Hawn known to film—a wild flower child compared to Bergman's proper lady.



2 OF LIFE AND LOVE 1953

Sometimes called, *We, the Women*, this Italian proto-mockumentary traced the lives of Bergman and four other big-time European actresses (including legend Isa Miranda and also-ran Alida Valli) outside of their Hollywood personas.



3 SARATOGA TRUNK 1945

Bergman's accent occasionally baffled American audiences, so Creole made as much sense as anything, right? That was likely the rationale for this Sam Wood-directed Western romance, in which Bergman stars opposite Gary Cooper.



4 THE HIDEAWAYS 1973

A precocious pair of siblings camp out at New York's Metropolitan Museum in this adaptation of the children's novel *From the Mixed-Up Files of Mrs. Basil E. Frankweiler* (Bergman plays the kooky, titular Mrs. Frankweiler).



5 DR. JEKYLL AND MR. HYDE 1941

Though Bergman was originally cast as the virtuous fiancée to Spencer Tracy's Jekyll, with Lana Turner as the “naughty prostitute,” Bergman wanted to eschew her good-girl image offscreen and requested she and Turner switch parts.

+ ALL IN THE FAMILY: Bergman (far right) and her second husband, legendary Italian neo-realist filmmaker Roberto Rossellini, celebrate the first birthday of twins Isabella and Isotta.



of a film entitled *Siamo Donne* that was filmed at our house, and we were the extras,” Rossellini says, chuckling. “So it’s almost like a home movie, a charming little 20-minute film.” She’ll wrap the performance series on October 10 in Rome, with Italian actor and director Christian de Sica as a special guest.

Rossellini sees the performances as a way of honoring Bergman’s illustrious career, which transcended genres and borders. “Mother spoke five languages and had a full career in English, a full career in Swedish, a full career in French and German, which is very unusual,” Rossellini says. “Sometimes you have actresses of high reputation, like Bette Davis and Katharine Hepburn, but they worked in Hollywood. [They never] worked in Europe as much as my mom did.”

But the series is also intended to spark conversations about film preservation, history and recognition as its own art form. “[More than just] remembering my mom—and I’m delighted that people do—film deserves the same reputation as art, as music, literature, painting,” she says. “So we have to behave toward this art as we have other art—with museums, archives, as historians to read it together—and invest in the effort to create memories. It’s not simply, ‘Don’t forget my mom.’”

It’s a fair point. Film as we know it is over 100 years old, making it one of our culture’s newest art forms (Internet memes and GIFs notwithstanding). When Bergman was born, the first feature-length “talkie” film—widely credited to be Al Jolson’s *The Jazz Singer*, in 1927—was still years away from premiering. “When she was a little girl, cinema was still [just] silent movies. And when her father, my grandfather, was a baby, cinema didn’t exist!” Rossellini says. “I thought the centennial [of Bergman’s birth] was the opportunity to talk about film restoration, film preservation, the contribution of artists for the medium, and to show my mom as an incredible representative of this art that’s only 100 years old.”

Once the many celebrations of Bergman’s life are over, Rossellini says, she “would like to not

work” for a while. For Rossellini, though, “not working” doesn’t exclude tackling yet another ambitious project. She intends to take the next few months off “so that I can write a new monologue, a new film series,” she says. Will it be in the vein of the kinky, oddly educational *Green Porno* (which examines the world of bizarre animal reproduction and often finds Rossellini donning animal costumes for live-action vignettes)? Rossellini won’t give specifics, saying only that it will focus on animal intelligence.

Fittingly, she has a role as a talking hamster in the Canadian drama *Closet Monster*, which premiered earlier this week at the Toronto International Film Festival, and she can be seen with Jennifer Lawrence and Robert De Niro in David O. Russell’s forthcoming mobster romp *Joy*, inspired by the life of female gangster Joy Mangano (played by Lawrence). Rossellini has yet to see a final cut of the film, which drops Christ-

INGRID BERGMAN: A LIFE IN PICTURES IS AN ALLURING TREASURE TROVE OF PHOTOS AND ESSAYS REMEMBERING THE LEGENDARY ACTRESS.

mas Day, but quips that her small part “might be *very* small” post-editing. Yet from the way she talks about the film, it’s likely a contender for the inevitable Isabella Rossellini commemorative retrospective to follow when she, like all mortals, eventually leaves this earth. **N**



+ NUN LOVELIER: Bergman’s daughter Isabella Rossellini makes her film debut as a nun at her mother’s side in the 1975 film *A Matter of Time*.

TWO QUESTIONS WITH SIR PATRICK STEWART

Star Trek's Captain Picard comes crashing down to Earth for his return to television

ONE EVENING, as writer Jonathan Ames (of defunct HBO comedy series *Bored to Death*) watched CNN, a thought occurred to him: Patrick Stewart would look fascinating and striking behind one of those anchor desks. A few months before, Seth MacFarlane had approached Ames about creating a show together, and MacFarlane had immediately suggested getting Stewart on board. (Yes, *that* Patrick Stewart—of *Star Trek* and stage-acting fame.) But it wasn't until Ames pegged the actor for a network news anchor that the show's premise started to materialize.

And thus Walter Blunt, star of the new Starz show *Blunt Talk*, was born. Blunt—a pseudonym Stewart often uses, taken from one of his first roles with the Royal Shakespeare Company—is a fast-talking, hard-drinking British network news anchor with a penchant for fucking up. Within the show's first 10 minutes, he's stoned out of his mind and reciting *Hamlet* on the roof of a police cruiser, right after being caught “just talking” with a prostitute.

Blunt Talk may be a rare run for Stewart at a television comedy, but he

insists it's not too distant from his many dramatic roles onstage, where he's performed works by the likes of Harold Pinter and Samuel Beckett. “Some of the best comedy comes out of necessity,” he tells *Newsweek*. “I have found, and I'm sure all comic actors know, that the more serious you get, the funnier [a situation] might become.”

Why does Walter Blunt want to establish himself as an anchor in the United States, as opposed to the U.K.?


Well, there is a backstory with Walter Blunt.... I asked [Ames] how he would feel if I were to write up a really detailed history: where he came from, who he was, his family, his education and so forth. And of course, I found myself using aspects of my own life. You know, I never expected to become a

well-known actor in American show business! That was entirely an accident. I got the job on *Star Trek* because I was staying with a friend, an English professor at UCLA, who asked me if I would help him out one night ... on campus by reading some extracts to illustrate a lecture he was giving. I did, and signed up for a course of public lectures with a man called Robert Justman, who was one of the producers of *Star Trek: The Next Generation*. And Robert [said] at some point during this scholarly, academic evening, “We found the captain.” I find myself six months later in the leading role [Jean-Luc Picard] of a U.S.-syndicated science fiction show, never on my game plan at all.

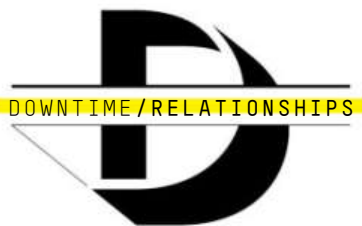
I was kind of paralleling my own life, where it was not Walter's ambition to be an American media star, but it was

something that happened to him, and having found that it happened to him, he then became fully engaged with American life.

Which news anchors do you remember?

Well, it's hard for me to answer that question because I didn't own a television set until I was 25. When I was a child, we didn't have a television set, we had a radio. Radio was the great influence in my life, [as were] some of the great BBC reporters, like Alvar Lidell and Richard Dimbleby. I loved listening to BBC News, and one thing has always impressed me: Back in the '40s and even into the '50s, BBC Radio newsreaders would read the evening news wearing tuxedos. Oh, yes! You can Google photos of them. BBC Radio news anchors and broadcasters dressed in black tie and tuxedos. 





LOVE IN TRANSITION

Falling in (and out of) love is complicated when you're transgender

THE TEXT was sent to 2.4 million people by Freddie Bologno: "I've texted for DoSomething as Alysha for 3yrs, but I've been struggling. Im trans, Im Freddie!"

Bologno, 27, works at Do Something, a digital organization that helps young people push for social change through social media and text messaging. For Bologno, the text was a way to both come out publicly and start a conversation about being young and transgender. But before coming out to the world, Bologno had to talk to his girlfriend, Tile Wolfe. "I just started crying," says Wolfe, remembering the moment Bologno said he wanted to start taking hormones to transition from female to male. "Not because I was sad, but because this was suddenly so real."

Wolfe, 23, has lived in New York for five years and has always identified as a lesbian. She met Bologno four years ago while standing in line for the bathroom at Metropolitan, a grimy gay bar in Brooklyn. They've been living together for two years now, alongside Buddha, their chubby gray cat. "We're so in love," Wolfe says, blushing.

There are hundreds of couples across the country with one or both members transitioning. And while trans celebrities like Caitlyn Jenner and Laverne Cox have offered insights into what a transitioning individual goes through, there is little out there concerning what it's like to transition as a couple, or what it's like to date as a transgender person or fall in love. "It's quite

common for trans people to wonder, Will anyone love me?" says Walter Bockting, a psychiatrist and co-director of the LGBT Health Initiative at Columbia University.

It's an issue Bockting has devoted two decades to trying to understand. He has spent so long studying the LGBT experience because, he says, there's "hardly any research on understanding transgender people as social beings in loving relationships."

To change this, Bockting started Affirm, "a study that aims to learn more about the identity development and health of people who identify as transgender." William Mellman, one of Bockting's Ph.D. students and the coordinator of Affirm, is spending the next 12 months talking with trans people and their partners in New York, San Francisco and Atlanta—the first comprehensive study of its kind.

For Basil Soper, 29, gender identity questions had always been either dismissed or suppressed. He moved out of his parent's home at 16, and though he found a welcoming LGBT scene in Asheville, North Carolina, he was homeless for six months, and sought solace in "excessive drinking and drug use," he says.

Substance abuse is common among trans people. The Center for American Progress estimates that up to 40 percent of U.S. homeless youth identify as lesbian, gay, bi or transgender, compared with only 5 to 10 percent of youth

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MODERN LOVERS: Freddie Bologno, right, met his girlfriend Tile Wolfe four years ago. Wolfe supported Bologno's decision to transition to a man two years later. "I guess we're another straight white couple now," Wolfe laughs.

overall. The same study found that 62 percent of homeless LGBT youth experience discrimination from family, and are 8.4 times more likely to attempt suicide than their straight peers.

Those are statistics Alana Feral, 32, understands well. Without money or the support of her family, Feral says transitioning didn't seem like an option. Instead, she made the extreme choice to join the Army's special operations forces—an act she calls a "passive form of suicide." She served for six years, including a stint in Afghanistan as a medical sergeant. Though she still publicly identified as male, Feral says she actively tried to compensate for her inner femininity by "building a character...a mix of the Terminator, John Wayne and Wolverine." By the end of her tour, the pressure of maintaining the facade was too much: "I remember sitting next to an open chopper door and wanting to jump out."

Though Feral says she had been open with her then-girlfriend about her gender identity questions, when she got back to her home in Asheville, her "body issues and dysphoria made sex very difficult." Ultimately, her girlfriend saw through the mask. "She brought me a dozen red roses, told me she loved me," Feral says, "and broke up with me because she 'didn't want to be a lesbian.'"

Feral says the breakup was a kind of relief, as it confirmed that she could no longer hide her true

self. It proved to be the push she needed to start the long transition process.

It's a common occurrence in transgender relationships: As trans people start to embrace a new gender identity, their partners often must come to grips with their own sexual identity. This can end a relationship, but according to Bockting it can also help both partners become more open-minded about their own sexuality and the labels they use.

This is certainly true for Wolfe, who has long identified as a gay woman but now finds herself with a boyfriend. "I guess we're just another straight white couple now," she laughs, but adds that she and Bologno will "always be a queer couple."

Soper's current girlfriend, Johanna Campbell Case, dealt with similar questions when they started dating. She says she was very attracted to Soper but had never dated a trans person. "With Basil I feel like I've had this huge awakening. It's the best relationship of my life."

Campbell Case considers Soper her boyfriend—a designation that's helped him feel more comfortable with his gender identity. "It feels really good to

be seen as on par with other men," says Soper. "I'm just like the other guys."

For families of trans people too, seeing their loved one with a partner can be incredibly encouraging. One of the biggest concerns from Bologno's family was whether anyone would enter a relationship with a trans man. Having Wolfe, he says, makes the answer pretty obvious.

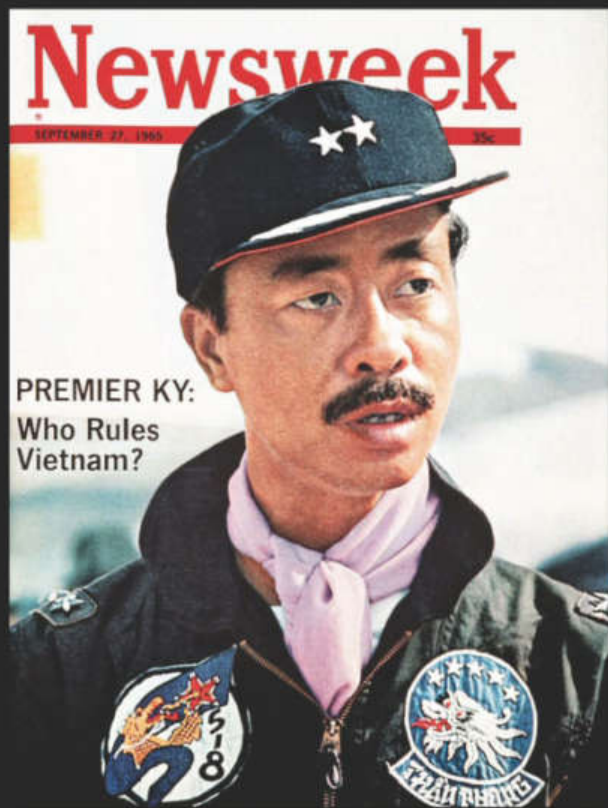
"IT'S QUITE COMMON FOR TRANS PEOPLE TO WONDER, WILL ANYONE LOVE ME?"

As Bockting says, "When the family sees a person in love and in a relationship, they can no longer deny that this transition is good for them."

Transitioning is a long, complex and often alienating process; without support from family, friends or a significant other, it can seem impossible. "I know that this is who Freddie is and always has been," Wolfe says of her partner. "But it takes feeling loved to do this." **N**

REWIND

50
YEARS



SEPTEMBER 27, 1965

IN "NO PLACE FOR A MAN," ABOUT THE
1965 BOOK *VICTORIAN LADY TRAVELLERS*

“They went off in the oddest directions, these dauntless ladies—usually alone, sometimes with husband in tow. They traveled to remotest Africa and dwelled among

cannibals—emerging, intact, to write their adventures. Proper Victorians, formidable moralists, no savage would dare to eat them.... They were the Victorian ‘new women,’ who dared leave the cozy hearth of papa or hubby to claim their inalienable right to be themselves, go where they pleased, do as they wished.”



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